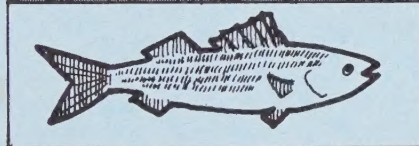
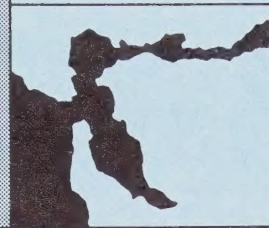
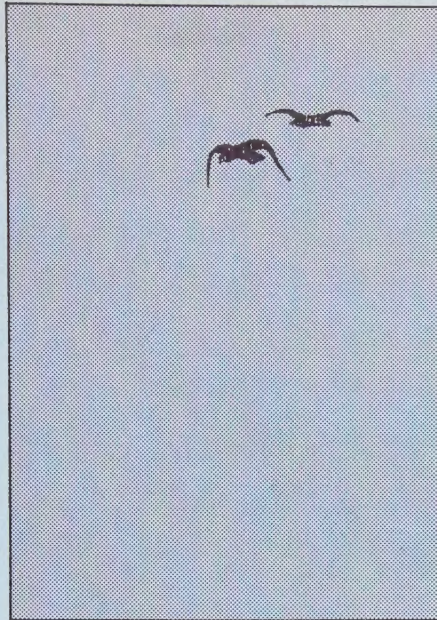


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Reg. plan - CA SF bay area
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water qual. mgmt " "
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DRAFT ENVIRONMENTAL MANAGEMENT PLAN FOR THE SAN FRANCISCO BAY REGION

PLAN RECOMMENDATIONS

December 1977

This plan was prepared by the Association of Bay Area Governments with a grant and other assistance from the Environmental Protection Agency, in cooperation with Bay Area Air Pollution Control District, Metropolitan Transportation Commission, San Francisco Bay Regional Water Quality Control Board and Counties of the Bay Area with assistance of these agencies: ■ Army Corps of Engineers ■ California Air Resources Board ■ California Department of Health ■ California Department of Transportation ■ Council of Bay Area Resource Conservation Districts ■ Governor's Office of Planning and Research ■ Lawrence Berkeley Laboratory ■ Lawrence Livermore Laboratory ■ San Francisco Bay Conservation and Development Commission ■ State Water Resources Control Board ■ State Solid Waste Management Board ■ Wastewater Solids Study

The Association of Bay Area Governments was designated by the State and Federal governments to prepare an Environmental Management Plan for the San Francisco Bay Area. This draft plan is the product of more than 14 months of cooperative effort by the staffs of the participating agencies listed on the front cover--as well as the Environmental Management Task Force, advisory committees and the public.

ABAG staff is responsible for the draft plan. Sections of the plan, however, were the specific responsibility of other agencies. In the development of the water quality management plan, the staffs of Bay Area counties drafted the surface runoff plan recommendations. In the air quality plan, the staff of the Bay Area Air Pollution Control District developed the stationary source controls, and the staff of the Metropolitan Transportation Commission developed the transportation controls.

The draft plan was prepared in part under a grant from the Environmental Protection Agency under Section 208 of the Federal Water Pollution Control Act Amendments of 1972. The opinions expressed are not necessarily those of the Environmental Protection Agency.

Draft
ENVIRONMENTAL MANAGEMENT PLAN
for the San Francisco Bay Region

PLAN RECOMMENDATIONS

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Water Quality Management Plan

recommendations

Water Quality Management Plan recommendations

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL * COST/YEAR OF RECOMMENDED ACTION	PORTION OF * TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 1 IMPROVE UNDERSTANDING OF BAY SYSTEM AND THE FATE AND EFFECTS OF POLLUTANTS ENTERING IT.								
<div> <p>* This column presents annualized costs. The annualized cost is the amount of money per year that would amortize the total cost of the program over the period 1978-2000 at a 6-3/8% interest rate.</p> </div>								
Action 1.1 Establish San Francisco Bay Delta Research Program (SFBDRP).	The effectiveness of pollution control actions is impaired by our limited knowledge of the ways in which bay waters and aquatic life are affected by pollutants. The recommended program will provide further information on the pollution cause and effect relationship and translate information into better standards for water quality protection. Monitoring and analysis will be centralized with a consequent saving in cost and an improvement in accuracy. Annual reports in pollution control will keep the public informed about the state of the bay.	ABAG in consultation with all affected parties.	August, 1978.	Joint Powers Agreement of dischargers and affected agencies.	\$185,000 (includes 1.1, 1.2, 1.4)	\$185,000 (includes 1.1, 1.2, 1.4)	State and EPA grants and fees from dischargers.	Voluntary.
Action 1.2 Establish research goals.		SFBDRP and RWQCB.	December, 1978.		Included in 1.1	Included in 1.1		
Action 1.3 Conduct research.		SFBDRP.	On-going.		\$1,800,000	\$1,800,000	State and Federal grants	

Caltrans = California Department of Transportation;

ABAG = Association of Bay Area Governments

EPA = Environmental Protection Agency;

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> <ul style="list-style-type: none"> o No impacts. <u>Water Quality</u> <ul style="list-style-type: none"> o Would improve water quality indirectly - provides data to make informed decisions. <u>Physical Resources</u> <ul style="list-style-type: none"> o Would benefit physical resources indirectly as water quality is improved, e.g., the aquatic community, flora, fauna and recreation. <u>Energy</u> <ul style="list-style-type: none"> o No impacts. <u>Amenities</u> <ul style="list-style-type: none"> o Would affect amenities indirectly; highly dependent on nature of actions taken as a result of monitoring data. 	<u>Financial</u> <ul style="list-style-type: none"> o Research program would require equipment, housing, personnel and operating funds. o Costs would be met by participants; dischargers, counties, RWQCB, SWRCB, and EPA. <u>Institutional</u> <ul style="list-style-type: none"> o Would centralize responsibilities for S.F. Bay Delta research and monitoring. o Would result in higher level of cooperation among agencies and dischargers. o Would improve accuracy and credibility of research and monitoring results. 	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o Employment - would employ approximately 170 persons in all phases of program. <u>Income and Investment</u> <ul style="list-style-type: none"> o Would require capital investment for research sampling and analytical facilities. <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o No impact. 	<u>Housing Supply</u> <ul style="list-style-type: none"> o No impacts. <u>Physical Mobility</u> <ul style="list-style-type: none"> o No impacts. <u>Health and Safety</u> <ul style="list-style-type: none"> o Might uncover health and safety problems as a result of research or monitoring o Would affect decisions on water quality that affect public health. <u>Sense of Community</u> <ul style="list-style-type: none"> o No impact. <u>Urban Patterns</u> <ul style="list-style-type: none"> o No impact. <u>Equity</u> <ul style="list-style-type: none"> o No impact.
<div style="border: 1px solid black; padding: 5px; text-align: center;"> *IMPACTS NOTED FOR THE POLICY ARE COMMON TO ALL ACTIONS </div>			
Impacts same as noted for Policy 1.	<u>Financial</u> Direct Public Cost of Implementation <ul style="list-style-type: none"> o (1978) \$100,000 (first-year administrative costs) o (1979-2000) \$192,000/year (Administrative and management costs-actions 1.1, 1.2, and 1.4). Other institutional impacts are the same as noted for Policy 1.	Impacts same as noted for Policy 1.	Impacts same as noted for Policy 1.
Impacts same as noted for Policy 1.	Impacts same as noted for Action 1.1.	Impacts same as noted for Policy 1.	Impacts same as noted for Policy 1.
Impacts same as noted for Policy 1.	<u>Financial</u> Direct Public Cost of Implementation <ul style="list-style-type: none"> o (1979-2000) \$2,000,000/year (estimate of research program costs) o Costs would be borne by State and Federal grants. Other institutional impacts are the same as noted for Policy 1.	Impacts same as noted for Policy 1.	Impacts same as noted for Policy 1.

SWRCB = State Water Resources Control Board

RWQCB = Regional Water Quality Control Board

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 1.4 Establish regionwide monitoring program.		SFBDRP and RWQCB in consultation.	December, 1978.	Porter-Cologne Act.	Included in 1.1	Included in 1.1		
Action 1.5 Conduct receiving water monitoring.		SFBDRP.	On-going.	Porter-Cologne Act.	\$1,700,000	0	Fees from dischargers.	
Action 1.6 Publish annual "state of the waters" report.		SFBDRP.	August, 1979 and annually thereafter.		\$32,000	\$32,000	State and EPA grants and fees from dischargers.	
Action 1.7 Establish regionwide water quality data management system.		ABAG.	December, 1978.		\$19,000	\$19,000	State and EPA grants, ABAG membership dues.	

ENVIRONMENTAL IMPACTS

INSTITUTIONAL/FINANCIAL IMPACTS

ECONOMIC IMPACTS

SOCIAL IMPACTS

Impacts same as noted for Policy 1.

Impacts same as noted for Action 1.1

Impacts same as noted for Policy 1.

Impacts same as noted for Policy 1.

Impacts same as noted for Policy 1.

Financial

Direct Public Cost of Implementation

- o (1980-2000) \$2,000,000/year (estimate of total Bay Area monitoring costs).
- o Costs to be borne by fees from dischargers.

Other institutional impacts are the same as noted for Policy 1.

Impacts same as noted for Policy 1.

Impacts same as noted for Policy 1.

Impacts same as noted for Policy 1.

Financial

Direct Public Cost of Implementation

- o (1979-2000) \$35,000/year (labor and materials for report production).

Institutional

- o Would provide means of providing monitoring program results to the public.
- o Would provide foundation of public support for regulatory actions.

Impacts same as noted for Policy 1.

Impacts same as noted for Policy 1.

Impacts same as noted for Policy 1.

Financial

Direct Public Cost of Implementation

- o (1979) \$10,000 (development of computer data management program (1979-2000) \$19,500/year (supply data to computer and provide information retrieval)).

Other institutional impacts are the same as noted for Policy 1.

Impacts same as noted for Policy 1.

Impacts same as noted for Policy 1.

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 2 <u>ESTABLISH CONTINUING PLANNING PROCESS FOR WATER QUALITY MANAGEMENT.</u>								
Action 2.1 Reaffirm water quality objectives for waters of the region.	Water quality objectives designed to protect beneficial uses are the foundation of the water quality management plan. Beneficial use designations and water quality objectives for the region are shown in Section 8. The objectives are identical to current objectives.	EMTF	August, 1978.	Federal Water Pollution Control Act & Porter-Cologne Act.	-0-	-0-		State & EPA review.
Action 2.2 Establish interim standard for delta outflow to Bay during winter months.	To ensure that sufficient wintertime flood flows enter the Bay, it is recommended that an interim standard be established. Research work done by SFBDRP will be directed at developing a basis for a final standard. The following standard is suggested: <ul style="list-style-type: none"> o A minimum of 2 million acre-feet of water per year will be reserved for elevated delta outflow. o 1 million acre-feet of this reservation will be released in a five day pulse at the rate of 100,000 cubic feet per second. o The second 1 million acre-feet will be released, immediately following the pulse, at a 10,000 cfs rate over a 50-day period. o These provisions represent a minimum, not a typical, allotment of water. In average-to-wet years, greater quantities of water should be available to elevate delta outflow. 	SWRCB	June, '78.		-0-	-0-		
Action 2.3 Sign memorandum of agreement establishing procedure for continuing planning.		RWQCB and ABAG.	March '78		-0-	-0-		Voluntary
Action 2.4 Update water quality management plan in conformance with other environmental goals.	As the population grows and information on pollutant effects and the effectiveness of control measures accumulates, the plan must be updated.	ABAG & RWQCB.	Every two years after August, 1978.	Federal Water Pollution Control Act & Porter-Cologne Act.	\$46,000	\$46,000	State appropriation and EPA grants.	State & EPA review.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
	<p>The Continuing Planning Process in and of itself would not have impacts. The monitoring and research results, and assessment of the impacts and effectiveness as policies and actions of the Water Quality Management recommendations are carried out, would provide the basis for future decisions. The potential impacts of carrying out the Continuing Planning Process recommendations would be similar to those identified for this initial phase of management planning.</p>		
<p><u>Air Quality</u></p> <ul style="list-style-type: none"> o No impact. <p>Other environmental impacts are the same as noted for Policy 2.</p>	Impacts same as noted for Policy 2.	Impacts same as noted for Policy 2.	Impacts same as noted for Policy 2.
Impacts same as noted for Policy 2.	Impacts same as noted for Policy 2.	Impacts same as noted for Policy 2.	Impacts same as noted for Policy 2.
Impacts same as noted for Policy 2.	Impacts same as noted for Policy 2.	Impacts same as noted for Policy 2.	Impacts same as noted for Policy 2.
Impacts same as noted for Policy 2.	<p><u>Financial</u></p> <p>Direct Public Cost of Implementation</p> <ul style="list-style-type: none"> o (1979-2000) \$50,000/year (direct staff cost to ABAG). <p>Other institutional impacts are the same as noted for Policy 2.</p>	Impacts same as noted for Policy 2.	Impacts same as noted for Policy 2.

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 3 <u>RE-ESTABLISH RECREATIONAL AND COMMERCIAL SHELLFISH HARVESTING IN THE BAY</u>								
Action 3.1 Conduct a preliminary survey and assessment of shellfish beds in the Bay.	Major shellfish beds suitable for recreational harvesting would be identified and assessed. The types and sources of contaminants affecting these beds would also be identified.	State Dept. of Health, Dept. of Fish and Game or consultant.	Feb. '78		\$50,000	\$50,000	EPA and/or State grants	
Action 3.2 Establish a systematic monitoring and sampling program of selected shellfish beds.	Based on findings from 3.1 a selected number of shellfish beds would be monitored and sampled for bacterial contamination over at least a 12-month period.	State Dept. of Health and perhaps county health departments.	June '78		\$200,000	\$200,000	Federal grants, State funds from shellfish harvesting license fees	

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> <ul style="list-style-type: none"> o No direct impacts. <u>Water Quality</u> <ul style="list-style-type: none"> o May provide basis for improving water quality. o Would provide data for making informed decisions. <u>Physical Resources</u> <ul style="list-style-type: none"> o Would permit use of a valuable and renewable resource. <u>Energy</u> <ul style="list-style-type: none"> o No direct impacts. <u>Amenities</u> <ul style="list-style-type: none"> o Would provide an additional recreational source that is inexpensive and convenient for Bay Area residents. o Would provide Bay Area residents with high quality and fresh shellfish in restaurants and markets. 	<u>Financial</u> <ul style="list-style-type: none"> o Program would require personnel and operating funds. o Cost would be met by Federal, State and private sources. <u>Institutional</u> <ul style="list-style-type: none"> o Would require the cooperation of State and local agencies such as Departments of Health & Fish and Game and County Health Departments. o May require additional staff resources to survey, monitor and patrol shellfish beds and establish criteria for commercial shellfishing. 	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o Would provide employment for approximately 5 persons in government agencies. o Would provide employment for an unestimated number of persons engaged in the shellfish industry. o Would provide a fresh and high quality product for restaurants and markets. <u>Income and Investment</u> <ul style="list-style-type: none"> o Initial capital investment by private firms that want to establish a shellfish industry. o Initial investment of governmental funds to facilitate the establishment of shellfishing. <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o A small license fee for recreational shellfishing. 	<u>Housing Supply</u> <ul style="list-style-type: none"> o No impact. <u>Physical Mobility</u> <ul style="list-style-type: none"> o Would provide a unique source of local recreation without having to travel out of the region. <u>Health and Safety</u> <ul style="list-style-type: none"> o If properly monitored and controlled, it would reduce risks of people getting ill from eating shellfish they harvested themselves. There is little or no control at present. o Would also reduce the illegal marketing of shellfish caught in the Bay if depuration/relaying facilities enable commercial interests to produce a safe product. <u>Sense of Community</u> <ul style="list-style-type: none"> o No impact. <u>Urban Patterns</u> <ul style="list-style-type: none"> o May encourage better public access to tidal lands and flats around the Bay. <u>Equity</u> <ul style="list-style-type: none"> o Impacts on special population groups (low and moderate income, minorities, etc.) depends on recipients of employment opportunities.
Impacts same as noted for Policy 3	Impacts same as noted for Policy 3	Impacts same as noted for Policy 3	Impacts same as noted for Policy 3
Impacts same as noted for Policy 3	Impacts same as noted for Policy 3	Impacts same as noted for Policy 3	Impacts same as noted for Policy 3

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 3.3 Establish an agreement between State Dept. of Health and Dept. of Fish and Game for patrolling shellfish beds.	If findings from 3.2 indicate recreational shellfish harvesting is safe, then the Department of Fish and Game would have to patrol the beds, keeping people off unapproved and conditionally approved beds while allowing harvesting in approved beds.	State Dept. of Fish and Game			\$100,000	\$100,000	State funds from shellfish harvesting license fees.	
Action 3.4 Establish criteria for commercial shellfishing in the Bay.	The State Department of Health would establish the type and extent of pilot studies and routine monitoring required as prerequisites to any approval of commercial shellfishing in the Bay.	State Dept. of Health.	August '78		0	0	EPA/ private funds from interested parties.	

Policy 4

ENSURE THAT WATER POLLUTION FACILITIES OR MEASURES EFFECTIVELY PROTECT WATER QUALITY.

Action 4.1 Issue and update monitoring requirements appropriate to permit conditions and in conformance with region-wide monitoring network.	As the program of treatment plant construction winds down the emphasis in water pollution control will shift from construction to operation and monitoring.	RWQCB.	Continuous.	Porter-Cologne Act.	\$160,000	-0-	State appropriation.	EPA review.
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ENVIRONMENTAL IMPACTS

INSTITUTIONAL/FINANCIAL IMPACTS

ECONOMIC IMPACTS

SOCIAL IMPACTS

Impacts same as noted for Policy 3

Impacts same as noted for Policy 3

Impacts same as noted for Policy 3

Impacts same as noted for Policy 3

Impacts same as noted for Policy 3

Impacts same as noted for Policy 3

Impacts same as noted for Policy 3

Impacts same as noted for Policy 3

Air Quality

- o No impact.

Water Quality

- o Would maintain receiving water quality by ensuring highest possible quality of treatment plant discharge.

Physical Resources

- o Would benefit aquatic resources as an indirect result of improved water quality.

Energy

- o No impacts.

Amenities

- o No impacts.

Financial

- o Refer to actions below.

Institutional

- o Would ensure that sewerage service agencies are protecting water quality.

Production of Goods and Services

- o Minor employment increase.
- o Would ensure that industries are protecting water quality.

Income and Investment

- o Wages would be paid to persons implementing this policy.

Consumer Expenditures

- o Refer to actions below.

Housing Supply

- o No impact.

Physical Mobility

- o No impact.

Health and Safety

- o Would assure protection of public health through proper operation and performance of facilities

Sense of Community

- o No impact.

Urban Patterns

- o No impact.

Equity

- o No impact.

Impacts same as noted for Policy 4.

Financial

Direct Public Cost of Implementation

- o (1978-2000) \$160,000/year (personnel costs for setting monitoring requirements).

Other institutional impacts are the same as noted for Policy 4.

Production of Goods and Services

- o Minor employment increase for agency.

Income and Investment

- o Same as Policy 4.

Consumer Expenditures

- o No impact.

Impacts same as noted for Policy 4.

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 4.2 Monitor performance of municipal and industrial wastewater systems in accordance with monitoring requirements.		Sewerage agencies and individual private companies.	Continuous.		Undetermined	-0-	Local and private funds.	RWQCB review.
Action 4.3 Publish annual report summarizing results of dischargers self-monitoring programs.		RWQCB in cooperation with SFBDRP.	Annually.		\$32,000	\$32,000	State	
Action 4.4 Coordinate wastewater treatment plant operator training programs.		ABAG.	Continuous.		\$29,000	\$29,000	Fees and possible federal grants.	
Action 4.5 Establish technical assistance program/information clearinghouse for wastewater system operations.	This program would provide treatment plant operators with an organization to call for technical assistance, location of spares, emergency assistance, etc.	ABAG.	Continuous.		\$40,000	\$40,000	ABAG dues if special districts become eligible for membership.	

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
Impacts same as noted for Policy 4.	<u>Financial</u> Direct Public Cost of Implementation <ul style="list-style-type: none"> o (1978-2000) \$182,700/year (cost to RWQCB for monitoring program). o Unknown costs for agencies. o Direct costs of laboratory and sampling equipment to be borne by discharger. o Costs would depend on specific monitoring requirements. o Personnel costs to be incurred by dischargers. Other institutional impacts are the same as noted for Policy 4.	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o Employment increase for dischargers--minor per discharger. <u>Income and Investment</u> <ul style="list-style-type: none"> o Dischargers would pay wages to samplers and laboratory personnel. <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o User charges may be increased to offset any increase in public service agency monitoring costs. o Prices of goods and services may increase if industries' monitoring costs are passed on to consumers. Direct Private Cost of Implementation <ul style="list-style-type: none"> o Costs to private industry cannot be estimated. 	Impacts same as noted for Policy 4.
<u>Water Quality</u> <ul style="list-style-type: none"> o No impacts. <u>Physical Resources</u> <ul style="list-style-type: none"> o No impacts. Other environmental impacts are the same as noted for Policy 4.	<u>Financial</u> Direct Public Costs of Implementation <ul style="list-style-type: none"> o (1979-2000) \$35,000/year (labor and materials for report production). <u>Institutional</u> <ul style="list-style-type: none"> o Would provide means of disseminating monitoring program results. o Would provide mechanism of communication with public. Other institutional impacts are the same as noted for Policy 4.	Impacts same as noted for Action 4.1	<u>Health and Safety</u> <ul style="list-style-type: none"> o No impact. Other social impacts are the same as noted for Policy 4.
Impacts same as noted for Policy 4.	<u>Financial</u> Direct Public Costs of Implementation <ul style="list-style-type: none"> o (1978) \$12,500, (1979-2000) \$30,000/year (personnel costs to ABAG). <u>Institutional</u> <ul style="list-style-type: none"> o Would place new obligations of manpower and materials upon ABAG. 	Impacts same as noted for Action 4.1	<u>Equity</u> <ul style="list-style-type: none"> o Would directly benefit specific economic group--wastewater treatment operators. Other social impacts are the same as noted for Policy 4.
Impacts same as noted for Policy 4.	<u>Financial</u> Direct Public Costs of Implementation <ul style="list-style-type: none"> o (mid 1978-2000) \$42,000/year (personnel costs to ABAG) Other institutional impacts are the same as noted for Action 4.4.	Impacts same as noted for Action 4.1	Impacts same as noted for Policy 4.

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
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Policy 5

PROVIDE FACILITIES NEEDED FOR MUNICIPAL SEWERAGE SERVICE AND WATER QUALITY PROTECTION.

The 20 year project list in Section J of this chapter provides wastewater treatment facilities to serve a Bay Area population of 6.1 million in a compact development pattern in the year 2000. Inclusion on the list in Section J establishes that such projects may be eligible for future State and Federal assistance. Each such project would remain subject to the environmental impact reporting requirements of the National Environmental Policy Act and the California Environmental Quality Act, and would also be subject to review under the requirements of Office of Management and Budget Circular A-95 prior to State and Federal funding action. Therefore, inclusion on the list does not automatically constitute prior endorsement of the Association of Bay Area Governments and State and Federal funding agencies.

The 20 year project list will be updated annually, as part of the continuing environmental management planning process. Future 20 year project lists may include changes in the timing and capacities of projects as additional information becomes available about population and employment growth trends in the region.

Growth and secondary effects of growth may have adverse impacts, particularly on air quality, as well as some positive impacts. So long as the capacities and timing of sewage treatment facilities on the 20 year project list are consistent with the Environmental Management Plan, the construction of wastewater facilities should accommodate growth planned for, but should not induce growth. The assessment table indicates in summary form the kinds of impacts that could be attributed to construction of wastewater treatment facilities. Quantified estimates of impacts are expressed as ranges to indicate the differences under high and low population assumptions.

ENVIRONMENTAL IMPACTS

INSTITUTIONAL/FINANCIAL IMPACTS

ECONOMIC IMPACTS

SOCIAL IMPACTS

Air Quality

- o Temporary dust problems during facility construction.
- o Poorly designed or operated facilities may cause local odor problems.
- o Localized potential increases in carbon monoxide levels.

Water Quality

- o At minimum would result in removal of suspended solids, some toxicants, some nutrients, most bacteria and most oxygen demanding substances.
- o Treatment plants would provide high bacteria and virus removal, nutrient removal and/or reduction of toxicants and resistant organic compounds.
- o Growth accommodated would increase surface runoff by increasing the amount of impervious surfaces.
- o Reclaimed wastewater would increase supplies of water for agricultural, industrial, park and golf course irrigation.

Physical Resources

- o Water quality improvements benefit fish and wildlife resources.
- o Would increase sewage solids volumes and would require coordination with regional Wastewater Solids Study plan results.
- o Consumes construction materials (mineral resources).
- o Would result in disruptions of adjacent land uses and reduced supply of resources (e.g., agricultural lands).
- o Growth accommodated would consume between 190,000 and 250,000 acres of land by 2000 or 50-65% of land available for development.
- o May reduce wildlife habitats through encroachment or filling of marshes, mudflats.
- o May reduce the supply of land available for recreation uses.

Energy

- o Consumes electricity, gas and diesel fuel during construction.
- o Commits to energy use for treatment plant operation.
- o Advanced physical-chemical plants sume significant amounts of energy.
- o Could result in energy production benefits when co-combustion projects (sludge and refuse) are undertaken at the plant site.

Amenities

- o Facility construction, operation and design may have adverse visual, odor and noise effects.

Financial

- Direct Public Cost of Implementation
 - o Capital (20 year construction estimate) \$2.4 billion.
 - o Operation and maintenance estimate \$122 million/year in 1995.

Fiscal Effects on Local Governments

- o Local governments and agencies would have to finance the local share of construction at a minimum of 12.5% of total costs or an estimated \$19 million (annualized) and all of \$71 million (annualized) operation and maintenance costs.
- o Specific fiscal effects depend on choice of financing mechanisms. Increased user charges, connection fees and property taxes in service areas would increase revenues of sewerage service agencies.
- o Indirect fiscal impacts would result from costs to provide public services (police, fire, etc.) to new development.

Institutional

- o Would require growth of existing agencies to provide expanded sewerage services.
- o Would require additional staff resources to provide public services to new development.
- o Would enable local governments to meet requirements of Federal and State standards.
- o Some projects may conflict with local general plans.

Production of Goods and Services

- o Employment - approximately 35,000 temporary and 700 permanent jobs would result from facility construction and operation.
- o Could permit influx of industrial/commercial businesses that would use municipal sewers.
- o In some cases would permit industry to stay rather than be closed by stringent direct discharge requirements.

Income and Investment

- o Indirect increase in plant operators and construction workers wages.
- o Facility construction will compete for funds on money markets.

Consumer Expenditures

- o Increased costs to consumers for connection to sewerage system.
- o Operation and maintenance costs are paid for by user charges.
- o Property taxes may increase in service areas to retire bonds issued to finance construction.

Housing Supply

- o Treatment facilities would accommodate approximately between 700,000 and 900,000 new housing units in the region by the year 2000.
- o Provision of sewerage service in unsewered areas could increase the supply and costs of housing in those areas.

Physical Mobility

- o Localized, short term disruptions in mobility may result during construction.
- o Congestion may result unless transportation improvements are made to serve development accommodated by improvements in wastewater facilities.

Health and Safety

- o Reduced health risks should result where discharges of poorly treated wastes are eliminated.
- o Indirect health benefits from water quality improvements.
- o Flood, subsidence, tsunami, landslide and seismic hazards may constrain the location, design and operational reliability of facilities.
- o Growth accommodated may affect local governments' effort to direct development away from hazardous areas.

Sense of Community

- o Character of neighborhoods and communities may change.
- o Provision of sewerage services in rural areas tends to change the character of rural communities to urban/suburban.

Urban Patterns

- o Provision of sewerage services based on compact growth assumptions encourages infilling.
- o Collection systems in unsewered areas outside of urban service areas may be in conflict with local general plans.

Equity

- o Sewer service charges are based on use and not ability to pay.
- o User charges, connection fees and property tax increases would impact low and moderate income households differently than high income households.
- o Development and housing impacts may affect the ability of low and moderate income families to afford adequate housing.

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 5.1 Expand existing and provide new facilities for municipal sewage collection, treatment and disposal. (This Action would include Actions 18.1, 18.3 and 18.4 of the Solid Waste Management Plan.)	Existing sewerage service facilities must be expanded to service the needs of growing communities. Needed facilities are shown in the 20 year project list contained in Appendix B.	Sewerage agencies.	See Appendix B.	Enabling legislation for cities and special districts.	\$240,000,000	-0-	Federal & State grants + user charges + assessments.	RWQCB can impose sanctions for non-compliance with permit conditions.
Action 5.2 Issue and update limits for municipal discharges in conformance with EMP.		RWQCB.	Continuous.	Federal Water Pollution Control Act Amendments.	\$94,000	-0-	State appropriation.	EPA review.
Action 5.3 Update twenty-year project list consistent with other elements of EMP.		ABAG & RWQCB.	Annually.	Federal Water Pollution Control Act Amendments.	\$7,000	\$7,000	State appropriation & EPA grants.	EPA review.
Policy 6 ENCOURAGE CONSOLIDATION OF TREATMENT FACILITIES AND DISCHARGE OF WASTEWATER TO WELL-MIXED AREAS OF THE RECEIVING WATERS.								
Action 6.1 Review all proposed facilities for consistency with above policy.	<p>Decisions regarding configurations of treatment and disposal facilities have been influenced by the desire to maximize use of existing facilities. As facilities wear out, earlier decisions must be re-examined to ensure that replacement is done in the most cost-effective manner.</p> <p>So long as the capacities, consolidations and timing of facilities are consistent with the Environmental Management Plan, the construction of wastewater facilities should not induce growth. The annual update of the 20 year project list would include projects consistent with the plan and would establish that such projects may be eligible for future Federal and State funding assistance. The impacts noted on the assessment table summarizes the kinds of impacts that could be attributed to expansion and consolidation of treatment facilities.</p>	ABAG.	Continuous.	Federal Water Pollution Control Act Amendments.	\$4,000	\$4,000	State appropriation & EPA grants.	ABAG. Facilities must be consistent with plan to be grant eligible.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
Impacts same as noted for Policy 5.	Impacts same as noted for Policy 5.	Impacts same as noted for Policy 5.	Impacts same as noted for Policy 5.
Impacts same as noted for Policy 5.	Impacts same as noted for Policy 5.	Impacts same as noted for Policy 4.	Impacts same as noted for Policy 4.
Impacts same as noted for Policy 5.	Impacts same as noted for Policy 5.	Impacts same as noted for Policy 5.	Impacts same as noted for Policy 5.
<u>Air Quality</u> <ul style="list-style-type: none"> o Temporary dust problems during construction of plants and interceptors. <u>Water Quality</u> <ul style="list-style-type: none"> o May improve plant reliability and water quality if inefficient small plants eliminated. o May improve local water quality if discharges to poorly mixed waters eliminated. <u>Physical Resources</u> <ul style="list-style-type: none"> o May improve marine or water oriented resources if water quality is improved. o Might lead to greater use of construction resources than alternative plan--or, depending on plan, may save resources. o Would benefit fish and wildlife resources in areas where water quality is improved (especially poorly mixed areas). o Plants, interceptors and concentration of discharge points in new areas of the Bay could disrupt fish and wildlife resources and ecological balance in marshes. <u>Energy</u> <ul style="list-style-type: none"> o Could require energy to move sewage to new treatment locations but may save some energy in treatment. <u>Amenities</u> <ul style="list-style-type: none"> o Facility and interceptor construction, operation and design may have adverse visual, odor and noise effects. 	<u>Financial</u> <ul style="list-style-type: none"> o Would directly determine grant eligibility of proposed alternative. o Would eliminate grant funding for non-approved projects. o May produce economies of scale in consolidation of facilities. o Would broaden service area and financial base for single facility. <u>Institutional</u> <ul style="list-style-type: none"> o May eliminate or require consolidation of some sewage treatment agencies. o At times would require plans of low institutional acceptability--resulting in resistance. o Would require high level of technical staffing at ABAG. o Would provide enforcement for regional policy. 	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o Employment - one large facility and service agency may require fewer employees than two component facilities/agencies. o Change in construction employment for new construction vs. renovation is indeterminable. <u>Income and Investment</u> <ul style="list-style-type: none"> o Impacts will depend upon specific situation. <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o Changes in costs of sewerage services (increases vs. decreases) would depend on specific situation. 	<u>Housing Supply</u> <ul style="list-style-type: none"> o Number of housing units accommodated by consolidations would vary (as would cost effects). <u>Physical Mobility</u> <ul style="list-style-type: none"> o Localized, short term disruptions in mobility may result during construction, especially of interceptors. <u>Sense of Community</u> <ul style="list-style-type: none"> o Impacts would be highly dependent on specific actions taken to consolidate facilities. <u>Urban Patterns</u> <ul style="list-style-type: none"> o Effects on land use would depend on actions taken to consolidate facilities. Actions consistent with this Plan should encourage infilling. <u>Equity</u> <ul style="list-style-type: none"> o Impacts would depend on financing mechanisms and profile of population in service areas affected. o Other impacts on special population groups would depend on effects on costs of housing and who would benefit from jobs created.

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 7 <u>ACCELERATE PROGRAMS TOWARD RECLAMATION AND REUSE OF WASTEWATERS.</u> (See Water Supply Plan)								
Policy 8 <u>ESTABLISH A PROGRAM OF SURFACE RUNOFF CONTROLS THAT EMPHASIZE LOW COST MEASURES TO REDUCE THE POLLUTANT LOAD FROM THIS SOURCE.</u>								
Action 8.1 Improve Street Sweeping (This action could be implemented as part of Action 1.1 of the Solid Waste Management Plan)	To develop and implement methods to improve street sweeping efficiency and maximize potential water quality benefits such as concentrating sweeping during rainy season, enforce parking restrictions on sweeping days, improve capabilities of	General purpose local governments (usually via the Public Works Department) and County Solid Waste Management Agencies	Continuous Local ordinances; SB5	Undetermined, at least \$21,200	\$21,200	Local funds, supplemented at times by Federal revenue sharing; SB650 1977	SSWMB will enforce if this Action is included in the county Solid Waste Management Plans.	
* General enforcement authority for local programs affecting surface water quality may be exercised by the Environmental Protection Agency and the State Water Resources Control Board acting through the Regional Water Quality Control Board.								

This column presents annualized costs. The annualized cost is the amount of money per year that would amortize the total cost of the program over the initial period (4-7 years) at a 6% interest rate.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> <ul style="list-style-type: none"> o Temporary and localized air pollutant emission increases may occur during sweeping operations o Reduced quantities of dust available for suspension as particulate matter <u>Water Quality</u> <ul style="list-style-type: none"> o Reduced transport of heavy metals, nutrients, pesticides, organic and microbiological pollutants into water bodies. Typical removals: 30-50% total solids, 25-40% BOD, 25-40% Kjeldahl nitrogen, 8-20% phosphate, 25-60% heavy metals o Reduced incidence of impaired uses (e.g., water supply) of water bodies <u>Physical Resources</u> <ul style="list-style-type: none"> o May indirectly benefit aquatic organisms o Enhanced water recreation potential and use o May reduce landfill capacities needed to accommodate residues. <u>Energy</u> <ul style="list-style-type: none"> o Sweeping equipment uses energy <u>Amenities</u> <ul style="list-style-type: none"> o Improved visual amenities on paved surfaces and in water bodies e.g., reduced floatable solids o Temporary, localized noise level increases from equipment operation (70-80 dBA at 50' on flat grade) May be mitigated by noise abatement measures 	<u>Financial</u> <p>Direct Public Costs of Implementation</p> <ul style="list-style-type: none"> o See County Surface Runoff control Plans Cost Data o Example Costs of Street Sweeping Programs <p>\$16 per cu. yd. of material collected</p> <p>\$18 per ton of material collected</p> <p>\$4-5 per curb mile</p> <p>Fiscal Effects on Local Governments</p> <ul style="list-style-type: none"> o Direct impacts on fiscal resources depend on revenue source(s) used - See County Plans <u>Institutional</u> <ul style="list-style-type: none"> o May require intergovernmental coordination o May require additional staff resources to improve efficiency of sweeping programs o May impact other public service levels 	<u>Production of Goods & Services</u> <ul style="list-style-type: none"> o Employment - Creation of job opportunities in the private sector may result (administrative and operation and maintenance jobs) <u>Income and Investment</u> <ul style="list-style-type: none"> o No impacts <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o No impacts 	<u>Housing Supply</u> <ul style="list-style-type: none"> o No impacts <u>Physical Mobility</u> <ul style="list-style-type: none"> o Temporary, localized disruption of physical mobility may result during sweeping operations. Can be mitigated by scheduling work during off-peak hours <u>Health & Safety</u> <ul style="list-style-type: none"> o Reduced health risks associated with water quality improvements and vector control benefits <u>Sense of Community</u> <ul style="list-style-type: none"> o Visual amenity benefits on streetscape and in urban access water bodies may enhance the sense of community <u>Equity</u> <ul style="list-style-type: none"> o Indirect impacts on special population groups would depend on the financing mechanisms proposed for implementation. In general, payment through the property tax mechanism differentially impacts low- and moderate-income groups <u>Urban Patterns</u> <ul style="list-style-type: none"> o No impacts

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 8.2 Control Use of Certain Chemicals (This action could be implemented as part of Actions 8.2, 8.3, 12.1, 12.2, and 12.4 of the Solid Waste Management Plan.)	To educate the user and the general public on the proper use and disposal of hazardous chemicals and to regulate the use of certain chemicals and encourage oil recycling.	County Solid Waste Management Agencies, County governments and special districts in Marin, Santa Clara, Solano, and Alameda Counties, Regional agencies, State Dept. of Health and SSWMB	Continuous	Local ordinances, State law, SB68 (1977)	Undetermined, at least \$1,100	\$ 1,100	Local funds RCRA, State Funds	Voluntary* SSWMB will administer SB68.
	* General enforcement authority for local programs affecting surface water quality may be exercised by the Environmental Protection Agency and the State Water Resources Control Board acting through the Regional Water Quality Control Board.							

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> <ul style="list-style-type: none"> o No impacts. <u>Water Quality</u> <ul style="list-style-type: none"> o Reduced amounts of toxic constituents in water bodies. o Reduced incidence of impaired uses (e.g. water supply) of water bodies. <u>Physical Resources</u> <ul style="list-style-type: none"> o Reduced risks of fish kills, exposure of plant and animal species to harmful substances. o Regulation of chemicals used in agricultural production processes, timber management programs etc. may adversely affect use of the resource base. May be mitigated by alternatives such as organic fertilizers and biological pest controls. o See also Hazardous Waste Assessment of Solid Waste Management Recommendations. <u>Energy</u> <ul style="list-style-type: none"> o Reduced use of energy intensive chemicals would not appreciably affect energy demand or supply. <u>Amenities</u> <ul style="list-style-type: none"> o No impacts. 	<u>Financial</u> <p>Direct Public Costs of Implementation</p> <ul style="list-style-type: none"> o See County Surface Runoff control Plans Cost Data. <p>Fiscal Effects on Local Governments</p> <ul style="list-style-type: none"> o Direct impacts on fiscal resources depend on revenue source(s) used- (See County Plans) program costs may be offset by additional taxes on sale of chemicals and distributors licenses. Control of sales may reduce or redistribute local revenues from product sales. <u>Institutional</u> <ul style="list-style-type: none"> o Improved regulation and enforcement may require intergovernmental coordination. o Public opposition to control of chemicals may occur. o May require additional public agency staff to do research, public education and information, and regulation. 	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o Employment- Job impacts (creation or elimination) would depend on control proposals effects on production. <u>Income and Investment</u> <ul style="list-style-type: none"> o Effects on wages and salaries depends on control effects on production and thereby on employment. o Effects on profits depends on effects of control proposals on production (increase or decrease demand) and availability of substitute products. <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o Product prices may increase if added costs to producers of chemicals due to controls can be passed on to the consumer or production cost increases (e.g. food costs) are passed on. o Consumers may elect to reduce consumption of certain chemicals or switch to substitutes due to price increases or new information on environmental effects. 	<u>Housing Supply</u> <ul style="list-style-type: none"> o No impacts. <u>Health and Safety</u> <ul style="list-style-type: none"> o Controls on chemical use may restrict vector and nuisance plant control program efforts or require shifts to biological controls. o Education on use of potentially harmful chemicals should reduce health and safety risks. <u>Sense of Community</u> <ul style="list-style-type: none"> o No impacts. <u>Equity</u> <ul style="list-style-type: none"> o Effects on special population groups depends on financing mechanisms and use of products subject to price increases. <u>Urban Patterns</u> <ul style="list-style-type: none"> o No impacts.

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 8.3 Clean Stormwater Collection System	To clean catchbasins, storm drains and open channels with multiple benefit objectives e.g., water quality and flood control.	General purpose local governments (usually via the Public Works Department) and special districts in Marin, Santa Clara, Solano Counties.	Continuous (See Time Line)	Local ordinances	Undetermined, at least \$2,800	\$ 2,800	Local funds	Voluntary*
* General enforcement authority for local programs affecting surface water quality may be exercised by the Environmental Protection Agency and the State Water Resources Control Board acting through the Regional Water Quality Control Board.								

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> <ul style="list-style-type: none"> o Reduced odors when accumulated debris is removed; decomposition prevented. o Temporary, localized air pollutant emission increases may occur during cleaning operations when motorized vehicles are used. <u>Water Quality</u> <ul style="list-style-type: none"> o Removal of accumulated solids (sediments, litter, leaves) may reduce BOD, Nitrates, Phosphates and oil and grease loads to water bodies from first flush effects of storms. o Reduced incidence of impaired uses (e.g. water supply) of water bodies. <u>Physical Resources</u> <ul style="list-style-type: none"> o May benefit aquatic organisms. o May impact land fill capacities where increased cleaning results in increased quantities of solids for disposal (e.g. 1 T. material/year/catch basin; open drainage channel deposits vary). <u>Energy</u> <ul style="list-style-type: none"> o Motorized equipment uses fuel. <u>Amenities</u> <ul style="list-style-type: none"> o Temporary localized noise level increases from equipment operation may be mitigated by noise abatement measures. 	<u>Financial</u> <p>Direct Public Costs of Implementation</p> <ul style="list-style-type: none"> o See County Surface Runoff control Plans Cost Data. <p>Example Costs:</p> <p>Catch basin Cleaning Costs \$6-8/catch basin or \$4-15/cu yd. Material Collected; Sewer Cleaning Costs \$50-100/cu. yd. material removed.</p> <p>Fiscal Effects on Local Government</p> <ul style="list-style-type: none"> o Direct impacts on fiscal resources depend on revenue source(s) used - See County Plans. o May be consolidated with on-going sewer system maintenance program costs. <u>Institutional</u> <ul style="list-style-type: none"> o May require additional staff resources (public works personnel on short term basis and inspection, administrative personnel on long-term basis) or reallocation of resources. o May result in displacement of another public service (or level of service) during concentrated cleaning effort periods. o May result in agency staff opposition to changed work assignments and schedules and added work loads. 	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o Employment- Creation of job opportunities in the private sector may result (e.g. engineering consultants, equipment manufacturers, monitoring and inspection personnel). <u>Income and Investment</u> <ul style="list-style-type: none"> o Effects on wages and salaries depend on need for additional staff to meet demand. o Increased profits may result from demand for private sector goods and services. <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o No impacts. 	<u>Housing Supply</u> <ul style="list-style-type: none"> o No impacts. <u>Physical Mobility</u> <ul style="list-style-type: none"> o Temporary, localized disruptions in physical mobility may occur during cleaning operations. May be mitigated by scheduling operations during off peak hours. <u>Health and Safety</u> <ul style="list-style-type: none"> o Water quality benefits may have indirect health benefits. o Cleaning activities may also benefit flood control channel maintenance. <u>Sense of Community</u> <ul style="list-style-type: none"> o No impacts. <u>Equity</u> <ul style="list-style-type: none"> o Impacts on special population groups depends on the financing mechanism(s) chosen to implement and the job benefits distribution. <u>Urban Patterns</u> <ul style="list-style-type: none"> o No impacts.

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 8.4 Control Littering (This Action could be implemented as part of Actions 1.1, 8.1 and 8.2 of the Solid Waste Management Plan.)	To develop anti-litter programs, ordinances and educate the public on the water quality impacts of litter.	Designated Solid Waste Management Agencies, Local governments (including special districts) in Alameda, San Mateo, and Sonoma counties.	Continuous	SB5; Local ordinances.	Undetermined, at least \$1,100	\$ 1,100	Local funds. SB650 (1977)	Voluntary* SSWMB will ensure implementation of SB5 and SB 650 (1977)
* General enforcement authority for local programs affecting surface water quality may be exercised by the Environmental Protection Agency and the State Water Resources Control Board acting through the Regional Water Quality Control Board.								

ENVIRONMENTAL IMPACTS

INSTITUTIONAL/FINANCIAL IMPACTS

ECONOMIC IMPACTS

SOCIAL IMPACTS

Air Quality

- o Reduced incidences of odors associated with decomposing debris and litter in water bodies and stormwater collection systems.

Water Quality

- o Reduced litter and organics (BOD phosphorus, nitrogen) available for introduction to stormwater system and waterbodies.
- o Reduced blockage of storm channels.
- o Reduced incidence of impaired uses (e.g., water supply) of waterbodies.

Physical Resources

- o May indirectly benefit aquatic organisms.
- o Enhanced water recreation potential and use where debris and litter associated pollution impairs use.
- o May impact solid waste management practices - landfill capacities may be affected by added quantities of solids for disposal; may be an added incentive for recycling, neighborhood composting and other resource recovery programs.

Energy

- o When augmenting alternative solid waste management programs, may benefit energy conservation efforts.

Amenities

- o Visual amenity benefits of cleaner landscapes and reduced debris in waterbodies.

FinancialDirect Public Costs of Implementation

- o See County Plans Cost Data.

Fiscal Effects on Local Government

- o Direct impacts on fiscal resources depend on source(s) of revenue used to fund program efforts - See County Plans.
- o State subvention funds and fines may offset costs of enforcement and education.
- o Reduced amounts of litter may result in cost savings in waste collection programs.

Institutional

- o May require intergovernmental coordination between State, regional and local government agencies and special districts.
- o Improved enforcement and intensified anti-litter advertising campaign may require additional staff or reallocation of agency personnel.

Production of Goods and Services

- o Employment - no impact expected in private sector.

Income and Investment

- o Public employment benefits may result in increases in wages and salaries.

Consumer Expenditures

- o No impacts.

Housing Supply

- o May indirectly benefit housing rehabilitation programs where litter control programs improve aesthetics of neighborhoods.

Physical Mobility

- o No impacts.

Health and Safety

- o Water quality improvements may have indirect health benefits.
- o Reduced litter may enhance vector control programs by eliminating or reducing habitats.

Sense of Community

- o Enhanced neighborhood aesthetics may contribute to improved sense of community.

Equity

- o Impacts on special population groups depends on financing mechanism(s) chosen to implement the program.
- o Where programs reduce litter and vectors with associated health benefits in areas with large concentrations of special population groups, those groups will benefit.

Urban Patterns

- o No impacts.

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 8.5 Control Dumping (This Action could be implemented as part of Actions 1.1, 8.2, 8.3, 12.1, and 12.2 of the Solid Waste Management Plan.)	To enforce dumping prohibitions, develop and adopt new ordinances with multiple benefit objectives and educate the public on the broader consequences of dumping and encourage oil recycling.	County Solid Waste Management agencies, Local governments (including special districts) in Alameda, Contra Costa, Napa, San Mateo, Solano and Santa Clara Counties.	Continuous	Local ordinances; SB5; RCRA	Undetermined, at least \$30,900	\$30,900		Voluntary* SSWMB and county Solid Waste enforcement agencies will enforce.
* General enforcement authority for local programs affecting surface water quality may be exercised by the Environmental Protection Agency and the State Water Resources Control Board acting through the Regional Water Quality Control Board.								

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> <ul style="list-style-type: none"> o May reduce incidence of odors associated with decomposing debris in water bodies and stormwater collection systems 	<u>Financial</u> <p>Direct Public Costs of Implementation</p> <ul style="list-style-type: none"> o See County Surface Runoff Management Plans Cost Data <p>Fiscal Effects on Local Governments</p> <ul style="list-style-type: none"> o Direct impacts on fiscal resources depend on source(s) of revenue used to fund programs - See County Plans o Reduced dumping may result in some cost and savings in public works programs (Ex. cost to remove oil dumped is \$150/gallon) o Fines for illegal dumping may offset costs of additional enforcement efforts o Use of re-refined oil by public agencies would result in savings in fleet operation and maintenance costs o Public agency oil recycling would generate revenues from sale of oil to re-refineries <p><u>Institutional</u></p> <ul style="list-style-type: none"> o May require additional staff resources to improve regulation and enforcement and educate public o May require cooperation of public agencies with regulatory and program responsibilities for control of dumping and oil recycling o May require additional regulations and guidelines to ensure proper labeling, handling and accessibility to re-refined oil 	<p>Production of Goods & Services</p> <ul style="list-style-type: none"> o Employment - Job opportunities may result if extensive oil recycling programs stimulate demand for more recycling firms o Production of recycled oil may increase o Additional firms may enter the market to meet increased demand <p><u>Income & Investment</u></p> <ul style="list-style-type: none"> o Increased wages and salaries may result from jobs created o May increase profits of firms benefited by increased oil recycling (Example: (prices fluctuate with oil costs)-service stations receive 8¢/gallon, used oil collection agents - 16¢/gallon, re-refineries \$1.20 - 1.60/gallon) <p><u>Consumer Expenditures</u></p> <ul style="list-style-type: none"> o Retail markets for re-refined oil are generally lacking. At such time as they are developed, consumers would receive the benefit of access to cost savings in purchase of re-refined oil 	<p>Housing Supply</p> <ul style="list-style-type: none"> o No impact <p><u>Physical Mobility</u></p> <ul style="list-style-type: none"> o No impact <p><u>Health & Safety</u></p> <ul style="list-style-type: none"> o Water Quality improvements may have indirect health benefits o Reduced dumping of debris and oil may augment vector and nuisance plant control program <p><u>Sense of Community</u></p> <ul style="list-style-type: none"> o Enhanced neighborhood and physical environment aesthetics may contribute to improved sense of community <p><u>Equity</u></p> <ul style="list-style-type: none"> o Impacts on special population groups depends on financing mechanism(s) chosen to implement the programs o Where programs reduce dumping and aid vector control and associated public health and enhancement in areas with large concentrations of special population groups, those groups will benefit <p><u>Urban Patterns</u></p> <ul style="list-style-type: none"> o No impacts
<u>Water Quality</u> <ul style="list-style-type: none"> o Reduced amounts of debris and oil may reduce BOD, phosphates, nitrogen, suspended solids, heavy metals introduced to stormwater system and waterbodies o Less oil would be available to leach into groundwater supplies o Reduced incidence of impaired uses (e.g., water supply) of water bodies <p><u>Physical Resources</u></p> <ul style="list-style-type: none"> o May indirectly benefit aquatic organisms by removing toxic substances from the environment o Enhance water-oriented recreation potential and use where dumping of debris and oil impairs use o Reduced dumping could reduce quantities of solid waste which are disposed of in landfills o Waste from re-refineries is high in concentrated metals and sulfur. Sludge created will require careful solids management <p><u>Energy</u></p> <ul style="list-style-type: none"> o Oil recycling may augment energy conservation efforts - 700 homes could be heated with BTU equivalent of oil currently dumped o Recycled oil can be used to produce other energy consumptive products such as asphalt o Re-refineries use part of waste product as fuel to power lighting and pump operations <p><u>Amenities</u></p> <ul style="list-style-type: none"> o Visual amenity benefits from cleaner landscape and less debris and oil slicks in water bodies 			

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 8.6 Repair Streets	To ensure that water quality benefits are a consideration in street repair guidelines.	Local governments in Contra Costa County.	Continuous (See Time Line)	Local ordinances.	Undetermined	-0-	—	Voluntary*
<p>* General enforcement authority for local programs affecting surface water quality may be exercised by the Environmental Protection Agency and the State Water Resources Control Board acting through the Regional Water Quality Control Board.</p>								

ENVIRONMENTAL IMPACTS

INSTITUTIONAL/FINANCIAL IMPACTS

ECONOMIC IMPACTS

SOCIAL IMPACTS

Air Quality

- o Localized increases in air emissions from repair equipment.
- o Reduced dust available for introduction as particulate matter.

Water Quality

- o Reduced total street contaminant loads which contribute to total suspended solids, BOD and toxic substances in urban runoff.
- o Reduced incidence of impaired uses (e.g. water supply) of water bodies.

Physical Resources

- o May indirectly benefit aquatic organisms.
- o May require physical resources to produce repair products.

Energy

- o Repair equipment uses energy as does production of asphalt and other repair products.

Amenities

- o Localized, temporary increases in noise levels during repair operations.

FinancialDirect Public Costs of Implementation

No costs above current commitments.

Fiscal Effects on Local Governments

- o Federal and State grant subvention funds offset much of cost of street repair with remainder coming from local general revenue funds.

Institutional

- o No impacts.

Production of Goods and Services

- o No impacts.

Income and Investment

- o No impacts.

Consumer Expenditures

- o No impacts.

Housing Supply

- o May indirectly benefit housing rehabilitation programs where street repair and maintenance improves accessibility and street systems in rehabilitation areas.

Physical Mobility

- o Local temporary disruption in physical mobility during repair operations.

Health and Safety

- o Water quality improvements may have indirect health benefits.
- o Street repair programs have public safety benefits.

Sense of Community

- o Streets kept in good repair may enhance neighborhood sense of community.

Equity

- o No impacts

Urban Patterns

- o No impacts.

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 8.7 Insure Proper Operation of Septic Tanks	To ensure proper operation by improved design, review and regulation.	Local and county governments (and special districts) in Santa Clara and Solano Counties.	Continuous	Local ordinances. Porter-Cologne Act.	Undetermined (Monitoring Cost appear under action 8.14)	-0-	Local funds.	Voluntary*
* General enforcement authority for local programs affecting surface water quality may be exercised by the Environmental Protection Agency and the State Water Resources Control Board acting through the Regional Water Quality Control Board.								
Action 8.8 Other Measures	To investigate neighborhood composting. To activate an animal management advisory committee. To investigate the hazardous material spill program	Local and county governments (including special districts, Solid Waste Management Joint Powers Authority) in Alameda County	Continuous	Local ordinances	Undetermined	\$ 1,100	Local funds	Voluntary*
* General enforcement authority for local programs affecting surface water quality may be exercised by the Environmental Protection Agency and the State Water Resources Control Board acting through the Regional Water Quality Control Board.								

ENVIRONMENTAL IMPACTS

INSTITUTIONAL/FINANCIAL IMPACTS

ECONOMIC IMPACTS

SOCIAL IMPACTS

See Impact Assessment of Policy 11

Impacts same as noted for
Action 8.5 (Control Dumping).

Impacts same as noted for
Action 8.5 (Control Dumping).

Impacts same as noted for
Action 8.5 (Control Dumping).

Impacts same as noted for
Action 8.5 (Control Dumping).

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 8.9 Control Erosion	To improve efforts to control erosion from earth moving activities by establishing and enforcing ordinances and incorporating erosion considerations into construction activities	Local and county governments, usually via Public Works and Building Inspection Departments (including special districts) in Solano, Sonoma, Marin, Santa Clara, Alameda, Contra Costa and San Mateo counties, Resource Conservation Districts	Continuous	Local ordinances	Undetermined, at least \$99,100	\$99,100	Local funds	Voluntary*
* General enforcement authority for local programs affecting surface water quality may be exercised by the Environmental Protection Agency and the State Water Resources Control Board acting through the Regional Water Quality Control Board.								
Action 8.10 Improve Agricultural Practices	To examine and improve agricultural and range management practices to ensure consideration of surface runoff. To develop land management plans with aid of Resource Conservation Districts	Resource Conservation Districts, Farm Bureaus and county governments in Napa, Solano and Santa Clara counties	Continuous	Local ordinances, State and Federal laws	Undetermined	Included in 8.9 costs	Local, State and Federal funds	Voluntary*
* General enforcement authority for local programs affecting surface water quality may be exercised by the Environmental Protection Agency and the State Water Resources Control Board acting through the Regional Water Quality Control Board.								

ENVIRONMENTAL IMPACTS

INSTITUTIONAL/FINANCIAL IMPACTS

ECONOMIC IMPACTS

SOCIAL IMPACTS

Air Quality

- o Localized reductions in dust/particulate matter from construction activities.

Water Quality

- o Reduced amounts of sediments and nutrients entering waterbodies from agricultural and construction activities.
- o Reduced siltation of stream channels, lakes and reservoirs and annual sediment loadings to the Bay contributed by land disruption by human activities.
- o Reduced turbidity, algae blooms, and oxygen depletion in streams, lakes and reservoirs.
- o Reduced incidence of impaired use (e.g., water supply) of waterbodies.
- o Reduced amounts of suspended solids available for chemical, pesticide and heavy metal binding.

Physical Resources

- o Reduced incidence of burial of aquatic bottom organisms and fish kills may result.
- o Indirectly benefits productivity of aquatic community by preventing or reducing interference with photosynthesis, elimination of food sources.
- o Reduced losses of productive topsoil, organic matter should enhance the productivity of agriculture and timber production activities.
- o May indirectly enhance recreation potential and use of waterbodies and adjacent lands.

Energy

- o May indirectly result in energy savings where dredging activities are reduced.

Amenities

- o Visual amenity benefits of less turbid waters and reduced eroded areas.
- o Visual amenity benefits of preserving the natural state of the environment.

FinancialDirect Public Costs of Implementation

- o See County Surface Runoff control Plans Cost Data.
- o See Council of Bay Area Resource Conservation Districts Handbook of Best Management Practices for example costs.

Fiscal Effects on Local Governments

- o Direct impacts on fiscal resources depend on revenue source(s) used - See County Plans.
- o Permit and plan review fees may offset local costs to implement and enforce.
- o Performance bonds may offset costs of clean-up.
- o Savings in operation and maintenance costs (e.g., in reservoirs) of local governments and special districts may result - an estimated \$5 million is spent annually to alleviate lake problems such as siltation, algae blooms, aquatic weeds, fish kills, etc.

Institutional

- o Effective implementation would require the cooperation of numerous public agencies such as National Park Services, U. S. Geological Survey, Corps of Engineers, California Department of Fish & Game, Flood Control and Water Districts, cities and counties.
- o New or amended ordinances, regulations or administrative rule-making may be required.
- o Some aspects of erosion control programs may meet with public opposition.
- o Additional staff resources may be required to implement and enforce the recommendations.

Production of Goods and Services

- o Employment - Creation of job opportunities may result (e.g., landscape and engineering consultants, construction firms).
- o Increased demand for goods and services may result in some new firms entering market.

Income and Investment

- o Effects on wages and salaries depends on control measures effects on production and employment.
- o Increased profits for firms benefiting from increased demand for goods and services.
- o Profit of firms and individuals bearing costs of controls should not be affected assuming costs can and will be passed on to the consumer (industry dependent response).

Consumer Expenditures

- o Where private industry costs to control erosion are passed on in product prices, costs of goods and services will increase.

Direct Private Costs of ImplementationExample Costs of Erosion Control and Agricultural Management Practices:

Hydroseeding/Hydromulching
\$425-900/acre

Siltation Berm
\$7.33/lineal foot

Waterway Fencing
\$1-2.75/lineal foot

Range Seeding
\$18/acre

Construction erosion controls for 80 unit subdivision may cost \$500-700/acre.

Housing Supply

- o Decreased supply (e.g., < 2DU/acre instead of < 4DU/acre on slopes > 15%) and increased costs of housing (e.g., the average price of a house may increase \$200-600 - an example design and installation cost of a best management practice) may result where erosion controls are a new component of the development approval process.

Physical Mobility

- o Localized, temporary disruption in physical mobility during construction activities.

Health and Safety

- o Indirect public safety benefits of reduced flood peaks and flood risks associated with siltation and alteration of natural flow regimes in streams.
- o Reduced erosion and mudslide risks.
- o Reduced likelihood of development in hazardous areas with attendant public safety benefits.
- o Reduced conditions conducive to propagation of vectors and other noxious plant and animal species.
- o Retention or debris basins may become a health hazard if water stagnates and vector problems result or a safety hazard (drowning).

Sense of Community

- o No impacts.

Equity

- o Indirect impacts on special population groups depends on financing mechanism(s) proposed as well as actual impacts on housing supply and costs.

Urban Patterns

- o Erosion control requirements should not in and of themselves affect urban patterns.

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 8.11 Divert Runoff from Contaminated Areas	Prohibit flushing of materials from impervious surfaces.	Local & county governments (including special districts) in Santa Clara, Solano & Sonoma Counties.	Continuous	Local Ordinances.	Undetermined, at least \$2,700	\$ 2,700	Local funds	Voluntary*
* General enforcement authority for local programs affecting surface water quality may be exercised by the Environmental Protection Agency and the State Water Resources Control Board acting through the Regional Water Quality Control Board.								
Action 8.12 Treat and Store Runoff	Construct treatment facilities to replace septic tanks; investigate sewer line infiltration and exfiltration problems; impound and/or treat runoff as last resort.	Local & county governments (including special districts) in Napa and San Mateo Counties.	Continuous	1973 Amendments to the Water Pollution Control Act, Porter-Cologne Act, local ordinances.	Undetermined	-0-	Local funds, Federal and State grants	Voluntary*
* General enforcement authority for local programs affecting surface water quality may be exercised by the Environmental Protection Agency and the State Water Resources Control Board acting through the Regional Water Quality Control Board.								
Action 8.13 Control Land Use	Develop creekside buffer strip requirements, establish performance standards for development in sensitive areas.	Local & county governments (including special districts) in Alameda, Solano, Marin and Santa Clara Counties.	Continuous	Local Ordinances.	Undetermined, at least \$1,500	\$ 1,500	Local funds	Voluntary*
* General enforcement authority for local programs affecting surface water quality may be exercised by the Environmental Protection Agency and the State Water Resources Control Board acting through the Regional Water Quality Control Board.								
Action 8.14 Establish Water Quality Monitoring Program	Establish continuous monitoring programs, sample to find cause of specific problems, monitor effectiveness of control practices.	Local & county governments (including special districts) in Alameda, Santa Clara, Solano, Napa, San Mateo, Sonoma & Contra Costa Counties.	Continuous	Local Ordinances, State Law.	Undetermined, at least \$40,100	\$40,100	Local, State and Federal funds	Voluntary*

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
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Impacts same as noted for
Action 8.5 (Control Dumping).

Impacts same as noted for
Action 8.5 (Control Dumping).

Impacts same as noted for
Action 8.5 (Control Dumping).

Impacts same as noted for
Action 8.5 (Control Dumping).

See Impact Assessment for Policy 5 of the Water Quality Management Plan (Provide Facilities Needed for Municipal Sewerage Service and Water Quality Protection

Impacts same as noted for
Actions 8.5 and 8.9.

Impacts same as noted for
Actions 8.5 and 8.9.

Impacts same as noted for
Actions 8.5 and 8.9.

Impacts same as noted for
Actions 8.5 and 8.9.

Air Quality

- o No impacts

Water Quality

- o Indirectly improves water quality - provides data to make informed decisions

Physical Resources

- o Indirectly benefits physical resources as water quality and land management practices improve

Energy

- o No impacts

Amenities

- o Indirectly affects amenities - highly dependent on nature of actions taken as a result of monitoring data

Financial

Direct Public Costs of Implementation

- o See County Surface Runoff control Plans Cost Data

Fiscal Effects on Local Governments

- o Direct impacts on fiscal resources depend on revenue source(s) used - See County Plans
- o Cost savings may result where monitoring consolidation occurs

Institutional

- o May require additional staff to increase monitoring activities
- o Would require cooperation and coordination among the numerous agencies involved in water quality monitoring

Production of Goods & Services

- o Employment - may create employment for sampling and analysis personnel in public and private laboratories

Income & Investment

- o Will require capital investment for sampling and analysis when that is a new function for a management agency and is not contracted to private firms

Consumer Expenditures

- o No impacts

Housing Supply

- o No impacts

Physical Mobility

- o No impacts

Health & Safety

- o Indirectly would benefit public health through water quality improvements
- o Could uncover health and safety problems meriting solution

Sense of Community

- o No impact

Equity

- o No impact

Urban Patterns

- o No impact

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 8.15 Establish a public education/information program (This Action could be implemented as part of Actions 8.2 and 8.3 of the Solid Waste Management Plan.)	Educate public to water quality impacts of dumping, littering, use of certain chemicals, construction, etc. Educate and promote recycling and proper disposal of wastes.	County Solid Waste Management agencies, Local & county governments (including special districts) in Alameda, Santa Clara, Sonoma, Napa & Contra Costa Counties, ABAG.	Oct. 1977-1983	Local ordinances; SB5; SB650 (1977)	Undetermined, at least \$15,500	\$15,500	Local and State funds. SB650 (1977)	Voluntary* SSWMB will enforce SB5 and SB650
General enforcement authority for local programs affecting surface water quality may be exercised by the Environmental Protection Agency and the State Water Resources Control Board acting through the Regional Water Quality Control Board.								

ENVIRONMENTAL IMPACTS

INSTITUTIONAL/FINANCIAL IMPACTS

ECONOMIC IMPACTS

SOCIAL IMPACTS

Impacts same as noted for
Action 8.14 (Establish Water
Quality Monitoring Program).

Impacts same as noted for
Action 8.14 (Establish Water
Quality Monitoring Program).

Impacts same as noted for
Action 8.14 (Establish Water
Quality Monitoring Program).

Sense of Community

- o Public education/in-
formation programs
about surface runoff
problems and solu-
tions could indi-
rectly improve the
sense of community.

Other impacts are same as
noted for Action 8.14.

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 8.16 Establish a surface runoff administrative structure and procedures for Continuing Planning	Establish a coordinating body, advisory committee and procedures to annual review and update of plan. Document existing practices and local agency actions to implement plan. Determine cost and financing mechanisms for annual work programs; investigate non-local funding sources.	Local & county governments (including special districts) in Alameda, Contra Costa, San Mateo, Santa Clara, Solano, Marin & Napa & Sonoma Counties.	Oct. 1977-1983	Local ordinances, State Law.	Undetermined, at least \$36,000	\$36,000	Local funds.	<p>General enforcement authority for local programs affecting surface water quality may be exercised by the Environmental Protection Agency and the State Water Resources Control Board acting through the Regional Water Quality Control Board.</p>

ENVIRONMENTAL IMPACTS

INSTITUTIONAL/FINANCIAL IMPACTS

ECONOMIC IMPACTS

SOCIAL IMPACTS

Air Quality

- o May indirectly benefit air quality when surface runoff management coordinates with air quality protection measures.

Water Quality

- o Indirect improvements in water quality as data, information and plans improve decision-making about surface runoff management.

Physical Resources

- o Indirect benefits to aquatic resources as overall water quality improves.
- o Indirect benefits of enhanced recreation potential and use from improved water quality and land management.

Energy

- o Surface runoff management practices may use energy; others may reduce use of energy by substituting management controls for energy consumptive structural controls.

Amenities

- o Indirect improvement of land and water visual amenities and natural state of environment.

Financial

Direct Costs of Implementation

- o See County Surface Runoff Management Plans Cost Data

ABAG Costs -

Fiscal Effects on Local Governments

- o Depends on source(s) of revenue used - See County Plans.

Institutional

- o Requires aggressive leadership by County 208 lead agency staff.
- o Requires involvement and cooperation of numerous agencies.

Production of Goods and Services

- o Employment- Jobs may be rented to carry out and meet new requirements if developed in the CPP.

Income and Investment

- o May indirectly increase or decrease profits of firms affected by new requirements if developed in the CPP.

Consumer Expenditures

- o Prices of goods and services may increase if new requirements are developed in the CPP.

Housing Supply

- o May indirectly affect the supply and cost of housing if new requirements result from the CPP which affect housing.

Physical Mobility

- o Localized short-term disruption in physical mobility where controls noted to have mobility impacts (Policy 1-17) are continued.

Health and Safety

- o Indirect health benefits from water quality improvements.

Sense of Community

- o May indirectly affect the sense of community depending on recommendations of CPP.

Equity

- o Impacts on special population groups depends on financing mechanism(s) proposed and effects of CPP proposals and findings on housing and jobs. Incidence analysis should be one review requirement of a program to develop financing mechanisms.

Urban Patterns

- o May indirectly affect land use.

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 9 PROVIDE FACILITIES NEEDED FOR INDUSTRIAL WASTEWATER TREATMENT AND DISPOSAL AND WATER QUALITY PROTECTION.								
Action 9.1 Expand existing and provide new facilities for treatment and disposal of industrial wastes discharged directly to the environment.	Direct industrial discharges that may have to be treated to a higher degree than at present are listed in Section K.	Individual pri- See Section vate companies. K.			\$25,000,000	-0-	Private funds. Low-interest rate loans available authorized by California Pollution Control Financing Act.	RWQCB can impose sanctions for non-compliance with permit conditions.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> <ul style="list-style-type: none"> o No impacts. <u>Water Quality</u> <ul style="list-style-type: none"> o Receiving waters would have lowered levels of pollutants such as: ammonia, bacteria, phosphorus, toxic organic compounds and heavy metals. o Less frequent oxygen depletion in localized areas of the Bay. <u>Physical Resources</u> <ul style="list-style-type: none"> o Increased amounts of toxic waste-water residuals would require additional capacity in limited hazardous waste disposal sites. o Directly consumes construction materials. o Would benefit fish and wildlife resources in areas where industrial discharges are eliminated or toxic levels reduced. <u>Energy</u> <ul style="list-style-type: none"> o Increased energy consumption would result from the addition of pollution abatement processes. <u>Amenities</u> <ul style="list-style-type: none"> o No impacts. 	<u>Financial</u> <ul style="list-style-type: none"> o See individual actions. <u>Institutional</u> <ul style="list-style-type: none"> o See individual actions. 	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o Approximately 3400 temporary and 800 permanent jobs to construct and operate industrial treatment facilities. o Production in certain sectors may be reduced by plant closures. o Some industries have achieved increased production efficiency. o In some cases may cause closure of some small industries--primarily in urban areas--if discharge requirements can't be met. May be mitigated by bond guarantee program of Small business Administration. <u>Income and Investment</u> <ul style="list-style-type: none"> o Investment in pollution control facilities. o Investment funds would be withdrawn from other areas of industrial activity. o Probable increases in pollution control workers wages. <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o See individual actions. 	<u>Housing Supply</u> <ul style="list-style-type: none"> o Housing industry is sensitive to diversion of investment funds. o Impacts on the supply and cost of new housing may result. <u>Urban Patterns</u> <ul style="list-style-type: none"> o In some cases may cause closure of industries--primarily in urban areas--if discharge requirements can't be met. o In other cases provides mechanism to allow industrial growth--and thereby urban growth--in conformance with Federal and State discharge requirements and needs of Bay Area environment. <u>Health and Safety</u> <ul style="list-style-type: none"> o Indirectly protects health and safety by removing gross toxicants and infectious agents from receiving waters. <u>Physical Mobility</u> <ul style="list-style-type: none"> o See individual actions. <u>Sense of Community</u> <ul style="list-style-type: none"> o Plant closures, job losses and out migration could alter community stability and character as community profiles change. This effect would be felt more in urban areas. <u>Equity</u> <ul style="list-style-type: none"> o See individual actions.
Impacts same as noted for Policy 9.	<u>Financial</u> <ul style="list-style-type: none"> o No impacts. <u>Institutional</u> <ul style="list-style-type: none"> o No impacts. 	<u>Direct Private Cost of Implementation</u> <ul style="list-style-type: none"> o (1978-2000) \$25,000,000/year (annualized costs @ 8% derived from national level estimates). <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o If pollution control measures are financed by increased costs of products, then consumer expenditures will increase. <p>Other economic impacts are the same as noted for Policy 9.</p>	<u>Physical Mobility</u> <ul style="list-style-type: none"> o Treatment costs borne by the petroleum industry may cause a rise in fuel prices and reduce mobility of population. <u>Equity</u> <ul style="list-style-type: none"> o Increased prices of consumer goods tend to disproportionately impact low and moderate income groups. <p>Other social impacts are the same as noted for Policy 9.</p>

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 9.2 Issue and update permits for direct industrial discharges.		RWQCB.	Continuous.	Federal Water Pollution Control Act Amendments & Porter-Cologne Act.	\$220,000	-0-	State appropriation.	EPA review.
Action 9.3 Expand existing and provide new facilities for pretreatment of industrial wastewaters discharged to municipal sewer systems.	Only that degree of treatment necessary to meet the municipalities discharge requirements are recommended at this time.	Individual private companies.	Continuous.		Undetermined. If all indirect dischargers had to treat to same level as direct dischargers, cost would be \$15,000,000.	Undetermined	Private funds, Low-interest rate loans available.	Sewerage agencies.
Action 9.4 Issue and update permits for industrial discharges to municipal sewer systems.		Sewerage agencies.	Continuous.		Undetermined	Undetermined	User charges.	RWQCB

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
Impacts same as noted for Policy 9.	<u>Financial</u> Direct Public Costs of Implementation <ul style="list-style-type: none"> o (1977-2000) \$217,000/year (current cost of RWQCB effort). Fiscal Effects on Local Government <ul style="list-style-type: none"> o No change from current costs and methods of financing permitting programs. <u>Institutional</u> <ul style="list-style-type: none"> o No impacts - no change from current practices of permitting agencies. 	<u>Consumer Expenditures</u> <ul style="list-style-type: none"> o No impacts. Other economic impacts are the same as noted for Policy 9.	<u>Physical Mobility</u> <ul style="list-style-type: none"> o No impacts. <u>Equity</u> <ul style="list-style-type: none"> o No impacts. Other social impacts are the same as noted for Policy 9.
<u>Water Quality</u> <ul style="list-style-type: none"> o Reduction of toxic discharges to sewers would protect sewage treatment plants from upset and decrease toxicant discharges to environment. Other environmental impacts are the same as noted for Policy 9.	<u>Financial</u> <ul style="list-style-type: none"> o No impact. <u>Institutional</u> <ul style="list-style-type: none"> o No impact. 	Direct Private Costs of Implementation <ul style="list-style-type: none"> o (1978-2000) \$15,000,000/year (annualized costs derived from national level estimates). Other economic impacts are the same as noted for Policy 9.	<u>Physical Mobility</u> <ul style="list-style-type: none"> o No impacts. Other social impacts are the same as noted for Policy 9.
Impacts same as noted for Policy 9.	<u>Financial</u> Direct Public Costs of Implementation <ul style="list-style-type: none"> o Exact current expenditures by sewerage service entities is not known. Fiscal Effects on Local Government <ul style="list-style-type: none"> o No changes from present practices. <u>Institutional</u> <ul style="list-style-type: none"> o Impacts same as noted for Action 9.2. 	Impacts same as noted for Action 9.2	Impacts same as noted for Action 9.2

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 10 REDUCE SEWAGE POLLUTION FROM SMALL BOATS IN MARINAS, HARBORS AND ENCLOSED BAYS.								
Action 10.1 Improve monitoring and documentation of vessel waste pollution.	Conducting periodic bacterial sampling of waters at all areas of small boat congregation; document effectiveness of current programs.	SFBDRP.	Quarterly; Porter-Cologne commencing Act. Dec., 1978.		\$150,000	\$150,000	State & EPA grants.	
Action 10.2 Establish no-discharge (treated or untreated sewage) zones within Bay Area.	Marinas, harbors, shellfish harvesting areas and water contact recreation areas would be declared no-discharge zones if present practices proven effective; enforced by U.S. Coast Guard.	SWRCB, RWQCB, and U.S. Coast Guard.	By January 30, 1982; contingent on results of 9.1.	PL 92-500 Sec. 312(f) 3,4: Porter-Cologne Act.	-0-	-0-		

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> <ul style="list-style-type: none"> o No impacts. <u>Water Quality</u> <ul style="list-style-type: none"> o Reduced coliform bacteria contamination of waters in harbors and marinas and shellfish harvesting areas. <u>Physical Resources</u> <ul style="list-style-type: none"> o Enhanced water recreation potential and use - particularly marine organism harvesting. <u>Energy</u> <ul style="list-style-type: none"> o Facility construction and operation requires energy; actual increased demand would be minor. <u>Amenities</u> <ul style="list-style-type: none"> o Indirect visual amenity impacts - reduced amounts of floatable sewage solids. 	<u>Financial</u> <p>Direct Public Costs of Implementation</p> <ul style="list-style-type: none"> o See below. <p>Fiscal Effects on Local Governments</p> <ul style="list-style-type: none"> o See below. <u>Institutional</u> <ul style="list-style-type: none"> o May require legislative amendments. o May require intergovernmental coordination. 	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o Employment - Approximately 70 temporary and 17 permanent public and private sector job opportunities may result (basic and service sector). <u>Income and Investment</u> <ul style="list-style-type: none"> o Increased employment would increase wages and salaries in construction and equipment supply. o Increased capital investments (see example below) may be required. o Increased profits may result for firms where production increases as a result of increased demand for products and services. o No impacts on profits of firms bearing costs of requirements, assuming costs can be passed on to consumers. <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o Increased prices of goods and services at marinas would result. 	<u>Housing Supply</u> <ul style="list-style-type: none"> o No impacts. <u>Physical Mobility</u> <ul style="list-style-type: none"> o Reduced pleasure craft travel time to pumpout facilities. <u>Health and Safety</u> <ul style="list-style-type: none"> o Reduced incidence of water quality related public health risks should accompany water quality improvements. <u>Sense of Community</u> <ul style="list-style-type: none"> o No impacts. <u>Equity</u> <ul style="list-style-type: none"> o Where costs of new requirements are wholly borne by boat owners the costs of pollution cleanup would fall on the source of pollution. <u>Urban Patterns</u> <ul style="list-style-type: none"> o No impacts.
Impacts same as noted for Policy 10.	<u>Financial</u> <p>Direct Public Costs of Implementation</p> <p>(1978-200) \$150,000/year (Administrative/Regulatory costs for Annual Monitoring Effort)</p> <p>Fiscal Effects on Local Governments</p> <ul style="list-style-type: none"> o No impact. <u>Institutional</u> <ul style="list-style-type: none"> o Requires cooperation of RWQCB. 	Impacts same as noted for Policy 10.	Impacts same as noted for Policy 10.
Impacts same as noted for Policy 10.	<u>Financial</u> <p>Direct Public Costs of Implementation</p> <ul style="list-style-type: none"> o Incremental cost increases in ongoing Coast Guard inspection and enforcement efforts. <p>Fiscal Effects on Local Governments</p> <ul style="list-style-type: none"> o Direct impacts on local government fiscal resources may result. <u>Institutional</u> <ul style="list-style-type: none"> o Impacts same as noted for Policy 10. 	<u>Consumer Expenditures</u> <ul style="list-style-type: none"> o Holding tank systems that are cheaper than flow-thru type devices would be required. o Boat owners with flow-thru type devices would bear additional cost of converting to holding tanks. o \$40 to \$250 typical cost for holding tank systems. <p>Other economic impacts are the same as noted for Policy 10.</p>	Impacts same as noted for Policy 10.

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 10.3 Inform boating public of marine sanitation device programs.	Provide information on types of devices, matching shoreside facilities, schedules, procedures and costs.	ABAG & RWQCB.	1978 & 1979.	Joint Powers Agreement.	\$5,000	\$5,000	State appropriation.	
Action 10.4 All marinas and harbors to provide vessel holding tank pump-out facilities.		Marina/harbor owner.	January, 1980.	Harbors and Navigation Code, Sec. 776, McAteer-Petris Act (as amended).	\$500,000	\$500,000	Owners-local and private funds; State Department of Navigation and Ocean Development (DNOD) funds.	SWRCB and BCDC permit programs.
Action 10.5 All marinas and harbors to provide on-shore toilet facilities.	For marinas, harbors, boat launch areas. Most appear to have adequate facilities--there are some exceptions.	Marina/harbor launch area owner.	January, 1980.	New State legislation required for existing facilities; McAteer-Petris Act (as amended) for new facilities.	Undetermined	Undetermined	Local and private funds; loans and grants from DNOD.	None yet for existing facilities; BCDC for new facilities.
Action 10.6 Revise DNOD's loans and grants programs to fund pump-out facilities and on-shore toilets.	Presently funds pump-out facilities only as part of overall new harbor or marina package.	California Department of Navigation and Ocean Development.		Harbors and Navigation Code; Div. 1, Chapter 2, Article 3; Revision of DNOD policy required.	-0-	-0-	Harbors & Water Craft Revolving Fund; Motor Vehicle Fuel Fund.	Governor's Executive Order.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
Impacts same as noted for Policy 10.	<u>Financial</u> Direct Costs of Implementation (1978 and 1979) \$30,000/year (Administrative Costs of Public Information Program) Fiscal Effects on Local Governments o No impacts. <u>Institutional</u> o No impact.	<u>Production of Goods and Services</u> o No impacts. <u>Income and Investment</u> o No impacts. <u>Consumer Expenditures</u> o No impacts.	Impacts same as noted for Policy 10.
Impacts same as noted for Policy 10.	<u>Financial</u> Direct Public Costs of Implementation Example Costs to Public Marinas for Pumpout Facilities: Capital (1980) \$20,000 < 100 berths \$45,000 > 100 berths O & M (1981-2000) \$2,000 - 4,500/year Administrative/Regulatory Costs to Ensure Compliance - Issue Permits: (1980) \$80,000/First Year (1981-2000) \$15,000/Year Fiscal Effects on Local Governments o Direct impacts on fiscal resources would result even with grant subvention. Fiscal impacts depend on revenue source used for local share of costs (user charges, bonds, revenue sharing). <u>Institutional</u> Impacts same as noted for Policy 10.	<u>Production of Goods and Services</u> o Employment - Jobs may be created in consulting firms, pumping equipment manufacturing firms, other materials manufacturing and contracting or construction firms. <u>Income and Investment</u> o Impacts same as noted for Policy 10. (see also direct private costs). <u>Consumer Expenditures</u> o Prices of services at marinas (rental fees, pumpout fees) would increase. Direct Private Costs of Implementation Example Costs to Private Marinas for Pumpout Facilities: Capital (1980) \$20,000 < 100 berths \$45,000 > 100 berths O & M (1981-2000) \$2,000 - 4,500/year	Impacts same as noted for Policy 10.
Impacts same as noted for Policy 10.	<u>Financial</u> Direct Public Costs of Implementation Example Costs to Public Marinas for Toilet Facilities: Capital (1980) \$42,000/marina O & M (1981-2000) \$4,200/year (Administrative/Regulatory Costs are included in 10.4 costs.) o Most marinas appear to have adequate toilet facilities. Fiscal Effects on Local Governments o Impacts same as noted above for Action 10.4. <u>Institutional</u> o Requires new regulations and administrative rule-making.	<u>Consumer Expenditures</u> Direct Private Costs of Implementation Example Costs to Private Marinas for Toilet Facilities: Capital (1980) \$42,000/marina O & M (1981-2000) \$4,200/year o Most marinas appear to have adequate toilet facilities. Other economic impacts same as noted for Action 10.4.	Impacts same as noted for Policy 10.

Assessment should be part of any amendment process of applicable State grants and loan programs. Amendment of the Department of Navigation and Ocean Development grant and loan program would, in general, distribute monies from gasoline tax revenues to both public and private marinas to pay for provision of facilities. Currently, public marinas charge nominal fees or do not charge at all for use of pumpout facilities.

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
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Policy 11

IMPROVE WASTEWATER DISPOSAL PRACTICES IN UNSEWERED AREAS CONSISTENT WITH REGIONWIDE DEVELOPMENT POLICIES

ENVIRONMENTAL IMPACTS

INSTITUTIONAL/FINANCIAL IMPACTS

ECONOMIC IMPACTS

SOCIAL IMPACTS

Air Quality

- o Instances of odorous conditions due to system failures should decrease.

Water Quality

- o Reduce coliform bacteria contamination of surface and groundwaters.

Physical Resources

- o Increased land requirements for on-site systems may result in competition with agricultural uses.
- o Increased water contact and non-contact (e.g. swimming, fishing, boating) recreation potential and use in streams and lakes now polluted by septic tank drainage.

Energy

- o Onsite disposal systems use less energy than centralized sewerage treatment systems.

Amenities

- o Visual amenity impacts-reduced likelihood of algal blooms from high nutrient concentrations in water bodies and in streams (especially during low flow periods).

FinancialDirect Costs of Implementation

See below

Fiscal Effects on Local Government

See below

Institutional

- o May require new legislation, amendments to regulations, codes.
- o May require intergovernmental coordination.
- o May require organizational changes

Production of Goods and Services

- o Employment - Creation of approximately 50 temporary and 50 permanent new job opportunities in the public and private sectors may result.

Income Investment

- o Increased wages and salaries in sectors where increased demand for goods and services results in new jobs.
- o Increased capital investments may be required.
- o Increased profits for firms where increased demand stimulates increased production.

Consumer Expenditures

- o Increased prices of goods and services may occur.

Housing Supply

- o Increased costs of existing housing maintenance and rehabilitation would result.
- o Location and density constraints may reduce new starts (supply) in areas proposing to use onsite system.
- o Increased new housing costs may result from decreased supply and costs to comply with new standards.

Physical Mobility

- o No impacts.

Health and Safety

- o Reduced likelihood of raw sewage ponding on surface, discharging to water bodies and drainage ways.
- o Fewer conditions which promote vectors and other noxious species (e.g. rodents, mosquitos, flies, algae).
- o Reduced health risks associated with bacterial contamination of ground and surface waters.

Sense of Community

- o No impacts.

Equity

- o Indirect impacts may result through impacts on costs of new and existing housing.
- o Where costs of new requirements or public management are wholly borne by residents of management area, the equity effects would depend on the social profile of the area and the financing mechanism chosen.

Urban Patterns

- o Impacts on the location, timing, density, and amount of new development may result.

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 11.1 Establish minimum regionwide standards for on-site disposal systems.	a). Standards for selection, design, evaluation and construction of on-site disposal systems. Standards would preclude substandard "interim" on site systems awaiting a "future" sewer.	RWQCB with assistance from County Health Departments and ABAG.	By December 1979, annually thereafter.	Porter-Cologne Act, enabling laws for County Health Departments.	\$10,000	\$10,000	State funds, Federal grants, local funds.	Voluntary, coordinated by ABAG.
	b). Incorporate new standards in local building codes and ordinances.	City and county governments.	By April, 1980.	Local government enabling legislation.	Undetermined	Undetermined	Local funds.	
Action 11.2 Establish public management of new on-site systems where such systems are technically appropriate and meet all other Environmental Management Plan requirements.	Monitor, service and repair functions exercised for new developments, where on-site systems are <u>technically appropriate</u> .	Local agencies	October, 1978.	Porter-Cologne Act; Calif. Health & Safety Code Section 6950 et seq.	Undetermined (cost of public management estimated to be \$65 per home).	Undetermined	Property taxes; service fees; "201", State Clean Water grants.	RWQCB can require public management of new developments.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<p>Impacts same as noted for Policy 11.</p>	<p><u>Financial</u></p> <p>Direct Public Costs of Implementation</p> <p>(1979) \$20,000 (First year administrative costs of standard revision)</p> <p>(1980-2000) \$10,000/year (Annual standard revision)</p> <p>(1980) \$45,000 (Cost to revise codes and ordinances - regional total or \$450/jurisdiction)</p> <p>Fiscal Effects on Local Governments</p> <ul style="list-style-type: none"> o No impact. <p><u>Institutional</u></p> <ul style="list-style-type: none"> o Existing ordinances, codes, regulations would need to be modified or amended. o Requires cooperation of numerous local and regional authorities. 	<p><u>Income and Investment</u></p> <ul style="list-style-type: none"> o Profits of firms bearing costs of meeting updated standards should not be affected assuming costs can and will be passed on to the consumer (industry-dependent response). <p><u>Consumer Expenditures</u></p> <ul style="list-style-type: none"> o Indirect increased prices of homes may result from increased costs to meet new requirements. 	<p><u>Health and Safety</u></p> <ul style="list-style-type: none"> o Standard enforcement should decrease development on unstable land and in flood plains. <p><u>Urban Patterns</u></p> <ul style="list-style-type: none"> o Would tend to discourage developments with marginal on-site systems in favor of sewerage areas. <p>Other social impacts are the same as noted for Policy 11.</p>
<p><u>Physical Resources</u></p> <ul style="list-style-type: none"> o Indirect impacts on solid waste management practices-land fill capacities and alternative sludge disposal practices (see example for Action 10.3). <p>Other environmental impacts are the same as noted for Policy 11.</p>	<p><u>Financial</u></p> <p>Direct Public Costs of Implementation</p> <p>(1978-2000) \$45,000/Management Agency/year</p> <p>(Example of Administrative/Regulatory costs for one year to inspect and monitor an area with 1000 septic tanks)</p> <p>Fiscal Effects on Local Government</p> <ul style="list-style-type: none"> o Impacts on fiscal resources would depend on choice of financing mechanism. If financed by annual assessments, based on assessed value, the property tax rate in the management zone would increase. o An example charge per household for monitoring and maintenance is \$150/year (Stinson Beach). <p><u>Institutional</u></p> <ul style="list-style-type: none"> o Direct impacts on legal capabilities may require creation of special districts or new service areas; expansion of responsibilities of existing agencies or districts; modifications to rules, regulations, and ordinances. o Direct impacts on intergovernmental responsibilities and coordination due to required cooperation of county health departments, RWQCB, zoning authorities, LAFCOs, service districts-may be mitigated by formal cooperative agreements, memoranda of understanding. 	<p><u>Production of Goods and Services</u></p> <ul style="list-style-type: none"> o Employment- Increased job opportunities may result if inspection services are contracted to private firms or individuals, new jobs may result in pumpout businesses and in equipment supply firms. o Increased demands for maintenance services may result in new firms entering the market. <p>Other economic impacts are the same as noted for Policy 11.</p>	<p><u>Housing Supply</u></p> <ul style="list-style-type: none"> o Costs of new housing may increase due to supply effects, cost to meet new standards and inspection service charges. <p>Other social impacts are the same as noted for Policy 11.</p>

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 11.3 Permit public management of existing on-site systems.	Optional where on-site systems <u>technically appropriate</u> ; recognizes that factors other than maintenance can cause failure.	Local governments.	As permitted by legislation.	Calif. Health and Safety Code Section 6950 et seq.	Undetermined	Undetermined	Property taxes, service fees; "201", State Clean Water grants.	RWQCB can issue waste discharge permits for on-site systems.
Action 11.4 Where on-site systems are inappropriate--install sewerage system.	County Health Department survey identifying problems leads to RWQCB cease and desist order and need for sewers. New developments not meeting updated standards for on-site would automatically need sewers.	Local sewerage agencies.	On-going.	Porter-Cologne Act.	Undetermined	Undetermined	System financed via "201", State Clean Water grants, local bonds, assessments, service charges, property taxes, etc.	RWQCB cease and desist order. Health Department can force evacuation of dwellings.
Action 11.5 Promote research of on-site disposal systems.	To improve on-site systems, develop new design and construction criteria and develop new systems.	Governor's Office of Appropriate Technology, private industry.	On-going.	California Government Code 65025 et seq.	Undetermined	Undetermined	State funds, perhaps Federal subsidies; private funds.	Voluntary.
Action 11.6 Revise State & Federal grants programs to ensure consideration for funding on-site systems.	To increase the number of on-site system and maintenance district components eligible for funding.	SWRCB, EPA	On-going.	PL 92-500; Porter-Cologne Act.	-0-	-0-	"201", State Clean Water grants program.	

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<p><u>Physical Resources</u></p> <ul style="list-style-type: none"> o Indirect impacts on solid waste management practices-land fill capacities and alternative sludge disposal practices (e.g., pumpout of 1700 onsite systems may produce 9600 gallons of septage to be disposed of every week. o Treatment prior to disposal could be a problem as treatment facilities near unsewered areas may not be able to handle increased volumes and concentration levels of septage. o In some cases, functioning onsite systems may reduce need to expand sewage treatment plant capacity. <p>Other environmental impacts are the same as noted for Policy 11.</p>	<p><u>Financial</u></p> <p>Direct Public Costs of Implementation</p> <p>\$175,000 (First year costs to locate and inspect 5000 onsite systems which is average number per county based on 1970 census data)</p> <p>\$76,000/year (Annual cost to monitor and inspect 1700 onsite systems beginning in year 2 and allowing for 100 new systems/year)</p> <p>Fiscal Effects on Local Government</p> <ul style="list-style-type: none"> o Impact on fiscal resources would depend on choice of financing mechanism. Costs of first year effort would probably require direct grants. o An example annual charge: \$150/yr (Stinson Beach). 	<p>Impacts same as noted for Action 11.2.</p>	<p><u>Housing Supply</u></p> <ul style="list-style-type: none"> o Existing housing rehabilitation and maintenance costs may increase (example costs: system reconstruction-\$1300, modification for pump-out access - \$260, pumpout costs - \$50-65). <p>Other social impacts are the same as noted for Policy 11.</p>
<p>See Impact Assessment for Municipal Element. A project's inclusion on the 20 year project list does not absolve the potential grantee from EIR/EIS requirements for funding under the Federal Water Pollution Control Act Amendments and the Clean Water Grants programs.</p>			
<p>Impacts same as noted for Policy 11.</p>	<p><u>Financial</u></p> <p>Direct Public Costs of Implementation</p> <p>Office of Appropriate Technology-on-going research funds.</p> <p><u>Institutional</u></p> <ul style="list-style-type: none"> o No impacts. 	<p>Impacts same as noted for Policy 11.</p>	<p>Impacts same as noted for Policy 11.</p>
<p>Assessment should be part of any amendment process of the Federal and State grants programs. In general, if construction of publically managed onsite disposal system is subsidized by Federal and State grant monies, one effect is to return taxpayers monies without bias toward any one method of treatment. Where such grant provision subsidizes second home developments, certain sectors of the population are disproportionately benefited. Payment for operation and maintenance costs would not be altered by grant amendments (i.e. they would continue to be paid for by user charges of one type or another). Note that eligibility amendments would result in reassessment of the 20 year project list as a part of the Continuing Planning Process.</p>			

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
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Policy 12

MONITOR EFFECTIVENESS OF EXISTING ARRANGEMENTS FOR PREVENTING AND DEALING WITH OIL AND CHEMICAL SPILLS IN BAY AREA.

ENVIRONMENTAL IMPACTS

INSTITUTIONAL/FINANCIAL IMPACTS

ECONOMIC IMPACTS

SOCIAL IMPACTS

Air Quality

- o No impacts.

Water Quality

- o Reduced incidence of water pollution from hazardous materials spills.
- o Reduced incidences of impairment of beneficial uses of bay waters.

Physical Resources

- o Reduced incidence of spills and improved spill clean-up would protect:
 - aquatic community
 - flora and fauna-wildlife habitats (marshes, salt ponds)
 - water-related recreation use and potential
- o Impacts on solid waste management may result:
 - spill clean-up often requires disposal in Class I sites (See Hazardous Waste Element of Solid Waste Management Plan)

Energy

- o No impacts.

Amenities

- o Indirect visual amenity benefits associated with reduced incidence of oil spills and improved containment and disposal.

Financial

Direct Public Costs of Implementation

- o See below

Fiscal Effects on Local Governments

- o Local spill prevention and clean-up programs may require commitment of local fiscal resources.

Institutional

- o Direct impacts on intergovernmental responsibility and coordination - requires cooperation of numerous Federal, State, regional and local agencies.

Production of Goods and Services

- o Employment- Public and private sector job opportunities may result from improved enforcement and new requirements.

Income and Investment

- o New requirements and enforcement of spill prevention programs may require private capital investments.
- o Profits of firms bearing costs of new requirements or improved enforcement should not be affected, assuming costs will be passed on to the consumer.

Consumer Expenditures

- o Increased prices of goods and services (especially petroleum and chemical based products) may result when costs incurred to comply with spill prevention programs are passed on to the consumer.

Housing Supply

- o No impact.

Physical Mobility

- o No impact.

Health and Safety

- o Reduced potential for public exposure to health and safety risks.

Sense of Community

- o No impact.

Equity

- o No impact.

Urban Patterns

- o No impact.

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 12.1 Monitor performance of agencies in Bay Area. (This Action could include part of Action 15.4 of the Solid Waste Management Plan.)	Monitor all agencies in dealing with spills including U.S. Coast Guard, Department of Fish & Game, EPA, RWQCB, State & County Offices of Emergency Services, Fire Departments and local contractors.	BCDC	Continuous after October 1978.	Porter-Cologne Act.	\$15,000	\$15,000	State funds.	Voluntary.
Action 12.2 Report annually to Governor, EPA Administrator and Secretary of Transportation.	Formally report on coordination, prevention efforts, cleanup performance and recommended actions.	BCDC	Annually, after October 1978.	Porter-Cologne Act.	\$15,000	\$15,000	State funds.	Voluntary.
Action 12.3 Develop local roadway spill containment and cleanup capabilities. (This Action could include part of Action 15.4 of the Solid Waste Management Plan.)	Local fire departments would prepare plans for dealing with a variety of spilled chemicals.	Local fire departments; County Offices of Emergency Services	By December, 1978.	Local government enabling legislation.	Undetermined	Undetermined	Local funds.	Voluntary.
Action 12.4 Reevaluate need to upgrade vessel traffic system in Carquinez Strait and N. San Pablo Bay.	A report would be prepared examining the addition of high-resolution radar coverage to the subject areas.	U.S. Coast Guard.	By June, 1979.	Ports and Waterways Safety Act of 1972.	\$1,000	\$1,000	Federal funds.	Voluntary.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
Impacts same as noted for Policy 12.	<u>Financial</u> Direct Public Costs of Implementation (1978-2000) \$15,000/year (Administrative costs to monitor agencies' performance) Other institutional/financial impacts are same as noted for Policy 12.	Impacts same as noted for Policy 12.	Impacts same as noted for Policy 12.
Impacts same as noted for Policy 12.	<u>Financial</u> Direct Public Costs of Implementation (1979-2000) \$16,000/year (Administrative costs of preparing report and the review of the report) <u>Institutional</u> <ul style="list-style-type: none"> o Annual report may recommend statutory changes, new regulations. Other institutional/financial impacts are same as noted for Policy 12.	Impacts same as noted for Policy 12.	Impacts same as noted for Policy 12.
Impacts same as noted for Policy 12.	<u>Financial</u> Direct Public Costs of Implementation Costs of training programs depend on duration of the classes, number of individuals selected for training, type of program. Fiscal Effect on Local Government <ul style="list-style-type: none"> o Local fiscal resources may be required to finance program development and training (cost/fire department). <u>Institutional</u> <ul style="list-style-type: none"> o Temporary impacts associated with fire department staff time for program development and training. 	Impacts same as noted for Policy 12.	Impacts same as noted for Policy 12.
<u>Air Quality</u> <ul style="list-style-type: none"> o No impacts. <u>Water Quality</u> <ul style="list-style-type: none"> o Reduced tanker accidents expected from traffic system should benefit water quality if radar system is recommended. o Reduced chances of impaired uses of San Pablo Bay and Carquinez Straits if radar system is added. <u>Physical Resources</u> <ul style="list-style-type: none"> o Reduced potential for spills from tanker accidents should reduce risks to physical resources. Example of resources which could be impacted: wildlife refuges, water-flow management areas, habitats of rare and endangered species, anadromous fish migration routes, other fish and shellfish resources, water-related recreation resources. <u>Energy</u> <ul style="list-style-type: none"> o No impacts. (Energy required to operate additions to radar system would be small increment.) 	<u>Financial</u> Direct Cost of Implementation (1979) \$10,000 (Cost to prepare a report on the cost-effectiveness of additional radar facility) Fiscal Effects on Local Governments <ul style="list-style-type: none"> o No impacts. <u>Institutional</u> <ul style="list-style-type: none"> o No impact. 	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o Employment- Minor short-term increase. <u>Income and Investment</u> <ul style="list-style-type: none"> o No impact. <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o No impact. 	<u>Housing Supply</u> <ul style="list-style-type: none"> o No impact <u>Physical Mobility</u> <ul style="list-style-type: none"> o No impact. <u>Health and Safety</u> <ul style="list-style-type: none"> o No impact. <u>Sense of Community</u> <ul style="list-style-type: none"> o No impact. <u>Equity</u> <ul style="list-style-type: none"> o No impact. <u>Urban Patterns</u> <ul style="list-style-type: none"> o No impact.

WATER QUALITY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 12.5 Incorporate report results from 11.3 and 11.5 into the EMP.	A function of the continuing planning process.	ABAG.	By December, 1979.	PL 92-500, Sec. 208	\$7,000	\$7,000	Local funds, supplemented by State and Federal Grants.	Voluntary.
Action 12.6 Enact Federal legislation on liability requirements for spillers and compensation for damage.	Oil spill issues may also be addressed by amendments proposed for the Federal Water Pollution Control Act.	U.S. Congress.	On-going.	U.S. Constitution.	Undetermined	Undetermined		Voluntary.
Action 12.7 Unless preempted by Federal law, enact State Legislation to increase liability of spillers and compensate for oil spill damage.	Bills introduced in the 1977-78 Regular Session of the State Legislature include SB536 and SB841.	State Legislature.	On-going.	State Constitution.	Undetermined	Undetermined		Voluntary.
Action 12.8 Promulgate final Federal regulations proposing improvements in requirements for navigational aids and tanker construction.	Proposed DOT standards issued 13 May '77 include: <ul style="list-style-type: none"> o Double bottoms on new large tankers. o Segregated ballast on new large tankers. o Inert gas systems on all crude oil tankers. o Backup radar systems with collision avoidance equipment on all large tankers. o Improved emergency steering standards for all tankers. Also S.682	U.S. Department of Transportation, U.S. Congress.	On-going.	Ports and Waterways Safety Act of 1972.	Undetermined (if proposed standards are finalized, the initial construction cost to bring U.S. vessels up to standards estimated to be \$120,000,000).	Undetermined	Local funds supplemented by State and Federal Grants.	

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
Impacts same as noted for Policy 12.	<u>Financial</u> Direct Cost of Implementation (1979-2000) \$7200/year (Administrative Costs) Other institutional/financial impacts are same as noted for Policy 12.	Impacts same as noted for Policy 12.	Impacts same as noted for Policy 12.
Impacts same as noted for Policy 12.	Impacts same as noted for Policy 12. Specific impacts of Federal and State legislation and regulations must be assessed by responsible Federal and State agencies, as well as legislative bodies.	<u>Consumer Expenditures</u> o New requirements will result in in- creased prices of consumer products. Other economic impacts are the same as noted for Policy 12.	Impacts same as noted for Policy 12.

Water Supply Management Plan

recommendations

Water Supply Management Plan recommendations

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL * COST/YEAR OF RECOMMENDED ACTION	PORTION OF * TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
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Policy 1

PROVIDE A SAFE AND RELIABLE WATER SUPPLY TO ALL CITIZENS AT A MINIMUM MONETARY AND ENVIRONMENTAL COST.

* This column presents annualized costs. The annualized cost is the amount of money per year that would amortize the total cost of the program over the period 1978-2000 at a 6-3/8% interest rate.

Action 1.1

Establish water resource management coordinating committee (WMCC).

The WMCC will include representatives of all major water and wastewater agencies in the Bay Area. The WMCC will provide a forum for discussion and resolution of issues of mutual interest to water management agencies.

WMCC

March 1978

Joint Exercise of Powers Act

\$9,400

\$9,400

Dues paid by committee members

Voluntary

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
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Air Quality

- o See actions.

Water Quality and Quantity

- o Should assure adequate supplies of high quality water.
- o Specific projects may adversely and beneficially affect water quality and quantity of sources.

Physical Resources

- o Provision of water supplies affects supply and use of land related resources (agriculture, wildlife habitats).
- o Provision of water supplies can increase agricultural productivity over that of dry-land farming.

Energy

- o Water projects require energy for construction and operation of facilities and water distribution.
- o Development accommodated may indirectly increase local energy demands.
- o Supply and transfer projects may augment energy supplies.

Amenities

- o Irrigated landscaping provides aesthetically pleasing surroundings in areas such as parks, golf courses, highway rights-of-way, yards.

Financial

- o May require capital investments for necessary facilities.

Institutional

- o Would require intergovernmental cooperation (Joint Powers Agreements, Memoranda of Understanding) and additional legal capabilities.

Production of Goods and Services

- o Assures continued production by businesses dependent upon adequate fresh water supplies.
- o Assures continued agricultural production on irrigated land.

Income and Investment

- o May require investment funds for capital facilities.
- o Promotes healthy economic climate which attracts investment funds.
- o Aids in maintaining income by assuring production will not be restricted due to lack of water supplies.

Consumer Expenditures

- o Change (increase vs. decrease) in water prices would vary and should be considered in decisions on supply and transfer projects.

Housing Supply

- o May accommodate increased housing starts in areas that were limited by water shortage.

Physical Mobility

- o No impacts.

Health and Safety

- o Promotes health of population through provision of safe water supplies.

Sense of Community

- o No impacts.

Equity

- o No impacts.

Urban Patterns

- o Adequate water supplies favor irrigated agriculture over dry-land farming and grazing.

Note: Impacts presented with policy are common to all actions under that policy.

Impacts same as noted for Policy 1.

Financial

Direct Public Cost of Implementation

- o (1978) \$2,000 (cost to ABAG for sponsoring first meeting)
- o (1979-2000) \$10,000/year

(Total cost to local water supply agencies to maintain committee)

Institutional

- o Requires cooperation of numerous water supply agencies.
- o Requires complex development of Joint Powers Agreement.

Impacts same as noted for Policy 1.

Impacts same as noted for Policy 1.

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 1.2 Evaluate the benefits and feasibility of increased inter-agency water transfers.		WMCC	July 1978		\$8,000	\$8,000	Dues paid by committee members	
Action 1.3 Evaluate the costs and benefits of accepting restrictions on water use during droughts.		WMCC	July 1978	Water agency enabling legislation	\$16,000	\$16,000	Dues paid by committee members	
Action 1.4 Construct needed water supply projects, including interties.		Water agencies		Water agency enabling legislation, Federal and State Legislation	\$15,000,000	-0-	User charges + State/Federal appropriations	

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> <ul style="list-style-type: none"> o Localized temporary increases in dust during construction of transfer projects. <u>Physical Resources</u> <ul style="list-style-type: none"> o Construction of pipelines may adversely affect physical resources. <p>Other environmental impacts are the same as noted for Policy 1.</p>	<u>Financial</u> <p>Direct Public Cost of Implementation</p> <ul style="list-style-type: none"> o (1978-1979) \$100,000 (estimated cost of study) o Financing would come from water agencies <p>Institutional impacts are the same as noted for Policy 1.</p>	<p>Impacts same as noted for Policy 1.</p>	<p>Impacts same as noted for Policy 1.</p>
<p>Impacts same as noted for Policy 1.</p>	<u>Financial</u> <p>Direct Public Cost of Implementation</p> <ul style="list-style-type: none"> o (1978) \$200,000 (estimated cost of study) <u>Institutional</u> <ul style="list-style-type: none"> o Study results may affect agency planning criteria for water supplies. 	<p>Impacts same as noted for Policy 1.</p>	<p>Impacts same as noted for Policy 1.</p>
<u>Air Quality</u> <ul style="list-style-type: none"> o Localized temporary increases in dust during construction. o Localized potential increases in carbon monoxide levels from development accommodated. <u>Water Quality</u> <ul style="list-style-type: none"> o Projects constructed on rivers tributary to the Bay system would alter freshwater Delta outflows. <u>Physical Resources</u> <ul style="list-style-type: none"> o Construction of water storage projects inundates land and alters the natural character of rivers. o Construction of supply pipelines may affect the supply of physical resources and alter their use. o Construction of water supply projects may provide water-related recreation areas. <u>Amenities</u> <ul style="list-style-type: none"> o Storage facilities and above ground pipelines would visually alter landscape. o Noise would be heard locally at construction sites. <p>Other environmental impacts are the same as noted for Policy 1.</p>	<u>Financial</u> <p>If all water projects are constructed, the direct public cost would be:</p> <ul style="list-style-type: none"> o (1978-2000) \$581,000,000 (estimated construction costs during period), operation and maintenance costs of combined projects) o Agencies would obtain funds from reserves or sale of bonds. Funds would be replaced by user charges. <u>Institutional</u> <ul style="list-style-type: none"> o Construction of water supply/storage projects is associated with serviced population growth and growth of water supply agency. o \$16,100,00/year (estimated operation and maintenance costs of combined projects). o Agencies would obtain construction funds from reserves or sale of bonds. Property taxes and user charges could increase in service areas. o Indirect fiscal impacts would result from costs to provide public services to development accommodated by supply projects. <u>Institutional</u> <ul style="list-style-type: none"> o Would require growth of service agencies to provide expanded water services. o Would require additional staff resources to provide public services to new development. 	<u>Consumer Expenditures</u> <ul style="list-style-type: none"> o Increased costs of water would result. Added costs may range from 10-30¢/kgal before treatment and distribution. <p>Other economic impacts are the same as noted for Policy 1.</p>	<u>Housing Supply</u> <ul style="list-style-type: none"> o Supplies provided by planned water supply projects would be more than adequate to service the approximately 700,000 additional housing units projected for the region by the year 2000. <u>Physical Mobility</u> <ul style="list-style-type: none"> o Temporary, local disruption of travel may result from project construction. <p>Other social impacts are the same as noted for Policy 1.</p>

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 1.5 Prepare a drought contingency plan.		WMCC/ Water Agencies	1978		\$32,000	\$32,000	User charges	
Action 1.6 Conduct survey of status, use, and plans for all groundwaters in region.		WMCC	1978-79		\$16,000	\$16,000	Dues paid by committee members, Federal grants	Voluntary
Action 1.7 Prepare regional groundwater basin management plan.	Contingent upon results of 1.6.	WMCC, ABAG, RWQCB	1979-80	PL92-500 Sec. 208	Undetermined	All	Local funds supplemented by State and Federal grants	Voluntary

Policy 2

ENCOURAGE WATER SAVING.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
Impacts same as noted for Policy 1.	<u>Financial</u> Direct Public Cost of Implementation <ul style="list-style-type: none"> o (1978) \$400,000 (estimated) Other institutional impacts are the same as noted for Action 1.1.	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o Assures equitable distribution of water supplies among consumers, agriculture and industry. Other economic impacts are the same as noted for Policy 1.	Impacts same as noted for Policy 1.
Impacts same as noted for Policy 1.	<u>Financial</u> Direct Public Cost of Implementation <ul style="list-style-type: none"> o (1978-79) \$200,000 (estimated) <u>Institutional</u> <ul style="list-style-type: none"> o Would provide all agencies with total regional picture of groundwater use. 	Impacts same as noted for Policy 1.	Impacts same as noted for Policy 1.
Impacts same as noted for Policy 1.	Impacts same as noted for Policy 1.	Impacts same as noted for Policy 1.	Impacts same as noted for Policy 1.
	Other impacts of this the action would be determined by an assessment of the features of the regional groundwater basin management plan.		
<u>Air Quality</u> <ul style="list-style-type: none"> o No impacts. <u>Water Quality and Quantity</u> <ul style="list-style-type: none"> o An estimated 6.5% reduction in water use by existing development or an average of 1.7 gpcd with moderate conservation practices. o Estimated 21% reduction in water needs of new developments or an average of 16.6 gpcd savings. o With moderate conservation practices existing supplies could serve greater population as approximately 120 mgd water could be saved by the year 2000. o Suitability of wastewater for reclamation and reuse is reduced. <u>Physical Resources</u> <ul style="list-style-type: none"> o If the need for new storage facilities is reduced by conservation practices, the adverse effects on the physical resource base due to supply development would be eliminated. 	<u>Financial</u> <ul style="list-style-type: none"> o See actions. <u>Institutional</u> <ul style="list-style-type: none"> o May require additional legal capabilities (new legislation) to implement. o Would require revisions in building codes. o May require renegotiation of contracts between wholesalers and distribution agencies as current contracts and price structures do not encourage water conservation. <u>Energy</u> <ul style="list-style-type: none"> o Reduced demand for energy necessary to supply water; 10% reduction in water use could result in a 5-10% reduction in energy use. <u>Amenities</u> <ul style="list-style-type: none"> o Effective water conservation would require changes in outside water use for residential, commercial and recreational purposes. 	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o Increase in production of water conserving devices. o Increased need for plumbing services to repair old systems. o Agricultural production costs may decrease as water saving practices are used; an estimated 100,000 acre feet per year could be saved or 100 mgd in the year 2000. <u>Income and Investment</u> <ul style="list-style-type: none"> o Initial capital investments would be necessary for an effective conservation program unit costs for Bay Area agriculture would be approx. 49¢/acre-ft. or 15¢/kgal. <u>Urban Patterns</u> <ul style="list-style-type: none"> o No impacts. 	<u>Housing Supply</u> <ul style="list-style-type: none"> o Existing housing costs should not be affected--retro-fitted conservation devices average \$1/home. o Increased maintenance of older and substandard homes. o Minor cost increase to new homes; moderate conservation practices could mean \$30/unit. <u>Physical Mobility</u> <ul style="list-style-type: none"> o No impacts <u>Health and Safety</u> <ul style="list-style-type: none"> o No impacts <u>Sense of Community'</u> <ul style="list-style-type: none"> d No impacts <u>Equity</u> <ul style="list-style-type: none"> o Agricultural conservation costs may put Bay Area farmers at comparative but temporary disadvantage.

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 2.1 Implement residential water savings programs.	"Moderate" residential water savings programs are recommended. These emphasize encouraging retrofit of water savings devices in existing homes and mandating building-in of water savings devices in new construction.	Water supply agencies/ Homeowners	Dec. 1978	Water agency enabling legislation	\$1,420,000	\$1,270,000	User charges and private funds	Voluntary
Action 2.2 Revise and update building codes to include water conservation devices in new construction.		Cities & Counties	Dec. 1978 Continuous	City charters	Undetermined	Undetermined	City and county funds	Additional State legislation may be necessary
Action 2.3 Establish regionally coordinated public information/education program.		WMCC/ ABAG	Dec. 1978		\$8,600	\$8,600	Dues paid by committee members	
Action 2.4 Enact legislation to provide incentives for retrofitting domestic water conservation devices and agricultural water conservation.		State Legislature/US Congress	Dec. 1978		Undetermined	Undetermined		

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
Impacts same as noted for Policy 2.	<u>Financial</u> <ul style="list-style-type: none"> o Uncalculated cost for public agencies to reduce their water use. <u>Institutional</u> <ul style="list-style-type: none"> o Water supply agencies would need to promote conservation programs. 	<u>Consumer Expenditures</u> <p>Direct Private Cost of Implementation</p> <ul style="list-style-type: none"> o (1980) \$1.00/household o (1980) \$1,770,000 (estimated total cost of flow restrictors on existing housing). <p>Other economic impacts are the same as noted for Policy 2</p>	Impacts same as noted for Policy 2.
Impacts same as noted for Policy 2.	<u>Financial</u> <p>Direct Public Cost of Implementation</p> <ul style="list-style-type: none"> o (1978) \$45,000 (estimated cost to change building codes). o These activities fall within normal duties of city and county government. <u>Institutional</u> <ul style="list-style-type: none"> o City and county governments must investigate devices and pass appropriate ordinances. 	<u>Production of Goods and Services</u> <p>Employment - a small employment increase of less than 80 for the manufacture and installation of water conserving devices.</p> <u>Income and Investment</u> <ul style="list-style-type: none"> o No impacts. <u>Consumer Expenditures</u> <p>Direct Private Cost of Implementation</p> <ul style="list-style-type: none"> o \$30 per new dwelling unit for installation of moderate plan conservation devices. o (1975-2000) \$26,680,000 (estimated total cost to new housing). 	Impacts same as noted for Policy 2.
Impacts same as noted for Policy 2.	<u>Financial</u> <p>Direct Public Cost of Implementation</p> <ul style="list-style-type: none"> o (1979) \$50,000 o (1980-2000) \$5,000/year (billboards, radio, T.V., newspapers and brochures). <u>Institutional</u> <ul style="list-style-type: none"> o No Impacts. 	<u>Consumer Expenditures</u> <ul style="list-style-type: none"> o No impacts <p>Other economic impacts are the same as noted for Policy 2.</p>	Impacts same as noted for Policy 2.
Impacts same as noted for Policy 2.	<u>Financial</u> <p>Direct Public Cost of Implementation</p> <ul style="list-style-type: none"> o Uncalculated cost of enacting legislation. o Government revenues lost to tax incentives may ultimately be recouped in other taxes. o If legislation features tax incentives--the cost to government is uncalculated. <p>Institutional impacts are the same as noted for Policy 2.</p>	<u>Consumer Expenditures</u> <ul style="list-style-type: none"> o Potential tax incentives can mean temporary savings to consumers. <p>Other economic impacts are the same as noted for Policy 2.</p>	Impacts same as noted for Policy 2.

WATER SUPPLY MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 2.5 Publish annual water use and conservation report.		WMCC/ ABAG	Ongoing		\$18,000	\$18,000	Dues paid by committee members	
Action 2.6 Revise water-rate structures to encourage conservation.		Water supply agencies	Dec. 1978	Water agency enabling legislation	Undetermined	All	User charges	
Action 2.7 Conduct study to determine savings in sewage treatment costs attributable to water conservation.		WMCC/ ABAG	April 1978		\$4,000	\$4,000	State & Federal grant may be available	
Action 2.8 Implement agricultural water conservation program.	This recommendation would require farmers to adopt more efficient irrigation measures. It would require State legislation and would only be feasible on a Statewide basis.	Farmers, irrigation districts			\$3,780,000	\$3,780,000	Private funds	

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
Impacts same as noted for Policy 2.	<u>Financial</u> Direct Public Cost of Implementation <ul style="list-style-type: none"> o (1979-2000) \$20,000/year (report preparation, printing and distribution). o Ultimate funding source is water charges paid to water agencies. <u>Institutional</u> <ul style="list-style-type: none"> o No impacts. 	<u>Consumer Expenditures</u> <ul style="list-style-type: none"> o No impacts Other economic impacts are the same as noted for Policy 2.	Impacts same as noted for Policy 2.
<u>Water Quality and Quantity</u> <ul style="list-style-type: none"> o Uniform, inclining or seasonal or peak demand rates should substantially reduce use of water by residential & commercial/industrial customers and should discourage the over application of irrigation water (estimated to be 20% of total applied) by agricultural customers. Other environmental impacts are the same as noted for Policy 2.	<u>Financial</u> <ul style="list-style-type: none"> o Increased revenues to water agencies from large volume water users if inclining or uniform commodity rates are applied. o If cost of delivering water remains constant, one could expect decreased revenues from small users if inclining or uniform commodity rates are applied. <u>Institutional</u> <ul style="list-style-type: none"> o Decisions by agencies on water rates will be subject to sharper scrutiny. o Could require renegotiation of wholesale price structures and contracts. 	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o The cost of goods produced with large volumes of water can be expected to increase. <u>Income and Investment</u> <ul style="list-style-type: none"> o Expected investment in water conservation devices for large users. <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o Price of some goods could increase. o Price of water to small user might decrease. 	Impacts same as noted for Policy 2.
<u>Water Quality and Quantity</u> <ul style="list-style-type: none"> o No impacts. <u>Energy</u> <ul style="list-style-type: none"> o No impacts. <u>Amenities</u> <ul style="list-style-type: none"> o No impacts Other environmental impacts are the same as noted for Policy 2.	<u>Financial</u> Direct Public Cost of Implementation <ul style="list-style-type: none"> o (1978) \$50,000 (estimated cost of study). o Could lead to revised estimates of costs of providing sewage treatment. <u>Institutional</u> <ul style="list-style-type: none"> o Could delay expansion of sewage facilities and reduce size of new facilities. 	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o Uncalculated reduction in projected need for sewage facilities construction. <u>Income and Investment</u> <ul style="list-style-type: none"> o Possible reduction in investment funds needed for facilities construction. <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o Possible reductions in sewer service charges. 	<u>Housing Supply</u> <ul style="list-style-type: none"> o No impacts. <u>Equity</u> <ul style="list-style-type: none"> o No impacts. Other social impacts are the same as noted for Policy 2.
<u>Water Quality and Quantity</u> <ul style="list-style-type: none"> o Estimated 15% saving in projected year 2000 agricultural water needs or 30% reduction in use over no conservation reductions. Other environmental impacts are the same as noted for Policy 2.	<u>Financial</u> <ul style="list-style-type: none"> o No impacts. <u>Institutional</u> <ul style="list-style-type: none"> o Reduced demands upon water supplied by irrigation districts. 	<u>Consumer Expenditures</u> Direct Private Cost of Implementation <ul style="list-style-type: none"> o (1980) \$62,800,000 (estimated capital expenditures by farmers). o Increased prices of farm products unless conservation savings offset potentially higher cost of water in future. Other economic impacts are the same as noted for Policy 2.	Impacts same as noted for Policy 2.

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 3 ENCOURAGE REUSE OF WASTEWATER WHERE COST-EFFECTIVE.								
Action 3.1 Conduct regional reclamation study.		WMCC	Nov. 1977	Porter-Cologne Act & Federal Water Pollution Control Act	\$161,000	-0-	EPA & State grants	
Action 3.2 Develop a priority system for allocation of grant monies for reclamation projects.		RWQCB	Dec. 1978		\$5,800	\$5,800		
Action 3.3 Construct cost-effective wastewater reclamation projects.		Wastewater agencies	Ongoing		\$10,200,000	-0-	EPA and State grants, user charges and revenue from sale of water	

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> <ul style="list-style-type: none"> o No impacts. <u>Water Quality and Quantity</u> <ul style="list-style-type: none"> o Relieves higher quality water supplies for more demanding purposes--e.g., potable supplies. o With reclamation, existing and proposed water supplies can serve greater population. o Total amount of water ultimately saved by reuse in Bay Area would be approximately 100 mgd. <u>Physical Resources</u> <ul style="list-style-type: none"> o Reclaimed waters can be used to develop new agricultural lands and to supplement irrigation necessary for lands currently in production. o Reclaimed water could be used for groundwater recharge, marsh enhancement and recreational lakes. 	<u>Financial</u> <ul style="list-style-type: none"> o See actions. <u>Institutional</u> <ul style="list-style-type: none"> o Requires cooperation of local, regional and state agencies. o Requires supportive regulations from State Health Department. <u>Energy</u> <ul style="list-style-type: none"> o Energy is consumed in advanced treatment of wastewater for reclamation (5 mgd plant uses approximately 360,000 kw hrs. electricity in a 6 month period). o Energy needs for distribution of reclaimed water may be lower if alternative is importing water over long distances. o 10% reduction in water use yields 5-10% reduction in energy use. <u>Amenities</u> <ul style="list-style-type: none"> o Irrigating parks, golf courses and highway rights-of-way with reclaimed water frees potable water for other uses. 	<u>Production of Goods and Services</u> <p>Employment- Possible increase in employment as a result of development of markets for reclaimed water--certain increase in treatment plant operator employment.</p> <u>Income and Investment</u> <ul style="list-style-type: none"> o Increase in wages for those affected by employment increase. o Increase in income of some engineering firms. o Increased investments for water reclamation facilities and distribution systems. <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o Increased availability of water supplies to agriculture and industry may keep production costs and consumer prices down. <u>Urban Patterns</u> <ul style="list-style-type: none"> o No impacts. 	<u>Housing Supply</u> <ul style="list-style-type: none"> o Increased water supplies to agriculture and industry may release potable supplies for domestic use. o Increased potable supplies in water short areas might permit new housing starts. <u>Physical Mobility</u> <ul style="list-style-type: none"> o No impact. <u>Health and Safety</u> <ul style="list-style-type: none"> o No impacts if reclaimed water is adequately treated. o Uses of reclaimed water are regulated by State Health Department. <u>Sense of Community</u> <ul style="list-style-type: none"> o No impacts. <u>Equity</u> <ul style="list-style-type: none"> o No impacts.
Impacts same as noted for Policy 3.	<u>Financial</u> <p>Direct Public Cost of Implementation</p> <ul style="list-style-type: none"> o (1978) \$2,000,000 o Matching funds requirement may cost the WMCC from \$500,000 to \$1 million. <p>Other institutional impacts are the same as noted for Policy 3.</p>	<u>Production of Goods and Services</u> <p>Employment - Some study funds will be passed to local water supply agencies or private consulting firms benefitting employment in those areas and for the WMCC staff.</p> <p>Other economic impacts are the same as noted for Policy 3.</p>	Impacts same as noted for Policy 3.
Impacts same as noted for Policy 3.	<u>Financial</u> <p>Direct Public Cost of Implementation</p> <ul style="list-style-type: none"> o (1978) \$15,000 o (1979-2000) \$5,000/year <u>Institutional</u> <ul style="list-style-type: none"> o If grant funds become limited, projects without reclamation features might not be funded to fullest extent. 	Impacts same as noted for Policy 3.	Impacts same as noted for Policy 3.
Impacts same as noted for Policy 3.	<u>Financial</u> <p>Direct Public Cost of Implementation</p> <ul style="list-style-type: none"> o (1977-2000) \$133,140,000 (estimate of construction costs expended by the year 2000) o (2000) \$5,330,000/year (estimated operating and maintenance cost in the year 2000 when all projects are built) <p>Other institutional impacts are the same as noted for Policy 3.</p>	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o Employment - approximately 2000 temporary and 200 permanent jobs would result from construction and operation of reclamation projects. <u>Income and Investment</u> <ul style="list-style-type: none"> o Increased wages of individuals benefitting from job opportunities. o May require capital investments by industry to undertake reclamation. 	

Solid Waste Management Plan

recommendations

Solid Waste Management Plan recommendations

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 1 THE REGIONAL SOLID WASTE MANAGEMENT PLAN SHOULD PRIMARILY BE BASED ON THE COUNTY SOLID WASTE MANAGEMENT PLANS: PRIMARY RESPONSIBILITY FOR ADEQUATE SOLID WASTE MANAGEMENT SHALL REST WITH LOCAL GOVERNMENTS.								
Action 1.1 Carry out county plans as part of the regional solid waste management plan. (This Action could include part of Actions 8.1, 8.4 and 8.5 of the Water Quality Management Plan.)	Carry out county solid waste management plans as part of the regional solid waste management plan.	Counties, with participation from cities and other local jurisdictions.	Ongoing	State Senate Bill 5 (SB 5)	\$ 450,000 ^a (\$5,250,000 ^a 1978-2000) \$215,000,000 ^c (\$570,000,000 ^c 1978-1980)	0	State and local funds.	State Solid Waste Management Board (SSWMB) may take legal action if plans are not implemented, or shall not approve any request for State or Federal financial assistance for any solid waste management project not in conformance with the approved county plans.
Action 1.2 Update county plans.	Update the county solid waste management plans in compliance with SB-5 and to be consistent with the updated regional solid waste management plan.	Counties.	Ongoing	SB 5	\$ 225,000 ^a (\$2,620,000 ^a 1978-2000)	0	Local general funds.	Existing SSWMB requirements will ensure plan update.
Action 1.3 Review the updated county plans.	Review the updated county solid waste management plans.	ABAG	Ongoing	SB 5	\$ 10,000 ^a (\$117,000 ^a 1979-2000)		Federal and State funds; ABAG dues.	Existing SSWMB requirements will ensure plan review.
^a Public cost. ^b Private cost. ^c Public and private costs. Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.								

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
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Policy 2

REGIONAL SOLID WASTE MANAGEMENT PLANNING SHOULD BE COORDINATED WITH STATE AND LOCAL PLANNING AND BE AN INTEGRAL PART OF AREA-WIDE ENVIRONMENTAL MANAGEMENT PLANNING.

Action 2.1

Update the regional plan.

Update the regional solid waste management plan, incorporating results of ongoing planning activities of other state, regional, and local agencies, and including more detailed planning for regional issues.

ABAG

1979; annually after 1979.

1972 Federal Water Pollution Control Act (FWPCA) Amendments Sec. 208; SB 424 (1977); RCRA.

\$ 55,000^a (\$640,000^a 1979-2000) \$ 55,000^a (\$640,000^a 1979-2000)

ABAG dues; Federal and State funds.

Existing EPA and State SWMB requirements will ensure plan update.

Policy 3

REGIONAL OR SUBREGIONAL RESOURCE CONSERVATION AND RECOVERY PROGRAMS SHOULD BE CONSISTENT WITH THE REGIONAL SOLID WASTE MANAGEMENT PLAN AND THE ENVIRONMENTAL MANAGEMENT PLAN, AND SHOULD FOCUS ON MULTI-JURISDICTIONAL PROJECTS FOR WASTE REDUCTION AND RECOVERY OF MATERIALS AND ENERGY FROM SOLID WASTE.

Action 3.1

Review proposed resource recovery projects.

Review proposed resource recovery projects including large-scale waste combustion projects to ensure consistency with regional solid waste management and other environmental goals and standards.

EPA, SSWMB, ABAG, State Clearing-house.

Ongoing

FWPCA Section 208, Office of Management and Budget-Circular A-95.

\$ 6,000^a 0 (\$65,000^a 1978-2000)

Federal and State funds; ABAG dues.

Agencies will carry out existing review authorities.

^a Public cost.

^b Private cost.

^c Public and private costs.

Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
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Air Quality

- o Indirect impact since the updated regional plan will consider air quality impact of large-scale energy recovery systems.

Water Quality

- o Direct impact since the updated plan will include control measures for landfills to protect ground and surface water quality.

Physical Resources

- o Direct benefits in solid waste management.
- o Direct benefits in resource conservation since the updated plan would include action programs for waste reduction, source separation, and resource recovery.

Energy

- o Indirect benefits due to resource conservation and reduction of energy demand.

Amenities

- o Indirect impact due to noise associated with solid waste facilities construction and operation recommended in the plan.

Financial

- o Direct Cost-Public:

ABAG	Total
1979-2000	\$643,116
r=6-3/8%	
r= 10%	\$471,748
- o Fiscal Effects on Local Government
 - New facilities may result in additional fees and other user charges.
 - Financing of recommended programs and facilities may depend on Federal and State grants.

Institutional

- o Location of certain recommended facilities may not be accepted by the public.
- o Implementation of regional plan may require JPA among cities and counties and agreements among private and public agencies.

Production of Goods and Services

- o Employment - Temporary and permanent increase in employment due to recommended programs and facilities construction.

Income and Investment

- o Same as Action 1.1

Consumer Expenditures

- o Costs for implementing the plan would be passed on to the public that receives garbage collection service or that dumps at landfills.

Housing Supply

- o No Impact.

Physical Mobility

- o No Impact.

Health and Safety

- o Compliance would reduce health and safety hazards associated with solid waste.

Sense of Community

- o No Impact.

Equity

- o No Impact.

Urban Patterns

- o No Impact.

Air Quality

- o Indirect benefits since the review would ensure consistency of proposed projects with air quality goals and standards.

Water Quality

- o Indirect benefits since the review would ensure consistency of proposed projects with water quality goals and standards.

Physical Resources

- o Direct impact on solid waste management.

Energy

- o Indirect benefits since the proposed projects would recover energy from solid waste.

Amenities

- o Direct benefits since the review would ensure mitigation measures for impacts related to amenities.

Financial

- o Direct Cost-Public:

(Administrative costs-funds committed)	
ABAG -	\$650/year
1978-2000	(For Region)
- o Other Reviewing Agencies (7)-

1978-2000	\$5,000/year
	(For Region)

Institutional

- o No Impact.

Production of Goods and Services

- o No Impact.

Income and Investments

- o No Impact.

Consumer Expenditures

- o No Impact.

Housing Supply

- o No Impact.

Physical Mobility

- o No Impact.

Health and Safety

- o Indirect benefits since the review would ensure compliance of proposed projects with health and safety standards.

Sense of Community

- o No Impact.

Equity

- o No Impact.

Urban Patterns

- o No Impact.

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 3.2 Develop additional information needed for resource recovery planning.	Develop additional information that would lead to construction of a network of new resource recovery facilities.	EPA, SSWMB in conjunction with cities, counties and ABAG.	1982	RCRA; AB 1395 (1976); SB 650 (1977).	\$ 996,000 ^a (\$11,300,000 ^a 1976-2000)	0	Federal and State funds; SB 650 (1977).	EPA will implement RCRA; SSWMB will implement RCRA, AB 1395, and SB 650
Policy 4 ALL SOLID WASTE DISPOSAL SITES MUST BE SITUATED, DESIGNED AND OPERATED TO PROVIDE PROTECTION TO THE SURFACE AND GROUND WATER QUALITY AND THE NATURAL ENVIRONMENT AS WELL AS PROTECTION OF PUBLIC HEALTH AND SAFETY.								
Action 4.1 Accelerate the adoption and updating of the Waste Discharge Requirements.	Accelerate the adoption and updating of the Waste Discharge Requirements for <u>all</u> landfill sites.	California Regional Water Quality Control Boards (RWQCB).	June 1979	California Water Code Sections 13300 (\$2,150,000 ^c & 14040; California Administrative Code, Title 23, Chapter 3, Subchapter 15.	\$ 184,000 ^c (\$2,150,000 ^c 1978-2000)	0	State general funds.	As a part of an agreement to be negotiated between ABAG and RWQCBs.
^a Public cost. ^b Private cost. ^c Public and private costs. Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.								

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air and Water Quality</u> o Indirect benefits since resource recovery facilities would be designed to meet air and water quality standards based on the newly developed information.	<u>Financial</u> o Direct Cost-Public: (Administrative costs - funds committed) EPA and SSWMB 1978-1982 \$966,000/year (For Region)	<u>Production of Goods and Services</u> o Same as Action 2.1. <u>Income and Investment</u> o Private investment may be needed for the development of new information.	No impact
<u>Physical Resources</u> o Direct benefits in solid waste management especially in resource recovery planning.	<u>Institutional</u> o Development of information may require JPA among cities and counties and agreements among private and public agencies	<u>Consumer Expenditures</u> o No impact.	
<u>Energy</u> o Same as Action 2.1.			
<u>Amenities</u> o No direct impact.			
<u>Air Quality</u> o Indirect impacts since compliance with the requirements may result in reduction of dust and odor at landfills.	<u>Financial</u> o Direct Cost-Public: (Administrative and regulatory costs-funds committed) RWQCB - 1978-2000 \$15,000 (Adopt requirements) 1979-2000 \$15,000/year (Update requirements)	<u>Direct Cost-Private</u> o Indirect impact on landfill site operators related to meeting requirements: 1978-1979 \$1,300,000 (total cost to meet new and revised requirements for 2 years) 1980-2000 \$80,000/year (meeting requirements)	<u>Housing Supply</u> o No impact.
<u>Water Quality</u> o Direct benefits since compliance with requirements would result in protection of surface and ground water quality.			<u>Physical Mobility</u> o No impact.
<u>Physical Resources</u> o Indirect benefits for surrounding ecosystems, agricultural lands due to increased protection of surface and ground water quality. o Indirect impacts on landfill management practices due to compliance with requirements. o Indirect temporary impacts on landfill site operations resulting from on-site construction to meet requirements.	<u>Institutional</u> o Direct impact on RWQCB because it may have to speed up the adoption of requirements.	<u>Production of Goods and Services</u> o Indirect impact resulting from interruption of landfill operations; extent would depend on site.	<u>Health and Safety</u> o Indirect impacts on public health by elimination of hazards from sub-standard landfills
<u>Energy</u> o Indirect impacts on energy demands due to energy required for construction.		<u>Income and Investment</u> o Direct impact on landfill site owners and operators due to required improvements to sites.	<u>Sense of Community</u> o No impact.
<u>Amenities</u> o Indirect benefits since compliance with the requirements may result in reduction of litter at or near the landfills.		<u>Consumer Expenditures</u> o Indirect impact on landfill site users due to increase in gate fees.	<u>Equity</u> o No impact.
			<u>Urban patterns</u> o No impact.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 4.2 Issue and enforce permits for solid waste facilities and disposal sites.	Issue and enforce permits for the operation of solid waste and hazardous waste facilities and disposal sites that are consistent with county and regional solid waste management planning.	California Solid Waste Management Board, City and County enforcement agencies, State and local health departments.	August 1977 Ongoing	AB 2439 (1977); AB 1593 (1977).	\$ 2,100,000 ^c (\$15,630,000 ^c 1978-2000)	0	State and local general funds.	State SWMB has the legal mandate to issue permits and may take legal action to ensure enforcement.

Policy 5

WHERE POSSIBLE, INCORPORATE METHODS INTO THE EXISTING PERMIT PROCESS FOR SOLID WASTE MANAGEMENT FACILITIES THAT WILL MAKE THE PROCESS MORE EFFICIENT AND CONVENIENT AND THAT WILL FACILITATE EARLY DISCUSSION OF PROJECT-RELATED ISSUES.

Action 5.1 Compile, update, and make available a permit register, and an application packet.	<p>ABAG will make available to the Counties descriptions of permits required for solid waste management facilities and a packet that includes permit application forms.</p> <ul style="list-style-type: none"> ABAG will compile information on each regulatory and commenting agency and distribute to the County Solid Waste Management Agencies. ABAG will collect permit applications forms from all regulatory agencies; develop a general cover sheet; distribute packets to County Solid Waste Management Agencies. County Solid Waste Management Agencies will design an application packet for an applicant to include all required permit forms. ABAG will monitor changes and advise management agencies. 	ABAG; County Solid Waste Management Agencies.	Ongoing	Joint Powers Agreement (JPA) of ABAG.	\$ \$ 1,100 ^a (\$13,100 ^a 1978-2000)	\$ 1,100 ^a (\$13,100 ^a 1978-2000)	ABAG dues.	One general agreement to cover all aspects of the approved permit coordination system (Policies 5-10) will be signed by participating agencies. It will specify implementation and enforcement mechanisms where appropriate. ABAG advocacy through EMTF and Executive Board.
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^a Public cost.

^b Private cost.

^c Public and private costs.

Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.

ENVIRONMENTAL IMPACT	INSTITUTIONAL/FINANCIAL IMPACT	ECONOMIC IMPACT	SOCIAL IMPACT
<u>Physical Resources</u> o Direct impacts on landfill management practices due to compliance with State standards. <u>Energy</u> o No impact. All other environmental impacts same as Action 4.1.	<u>Financial</u> o Direct Cost - Public: (All costs administrative and regulatory-funds committed) SSWMB - 1978 \$48,000 (issue permits) 1978-2000 \$80,000/year (enforce permits) <u>Counties and Cities -</u> 1978 \$40,000 (issue permits) 1978-2000 \$450,000/year (enforce permits) o Fiscal Effects on Local Governments - Cities and counties may impose permit fees. <u>Institutional</u> o SSWMB may delegate the authority of permit issuance to local enforcement agencies. o Permit requirements may be viewed negatively by some landfill site operators. o Permit requirements may be viewed positively by groups concerned with effects of solid waste management practices on environment.	<u>Direct Cost-Private</u> o Impact on all operators of private landfill sites in Region: 1978 \$40,000 (obtain permits) 1978-1979 \$450,000/year (make necessary improvements) <u>Production of Goods and Services</u> o Employment - permanent increase in employment due to issuance and enforcement of permits. <u>Income and Investment</u> o Private Investment may be needed to meet permit requirements. o May temporarily decrease profits of site operators due to capital investments. <u>Consumer Expenditures</u> o Costs for compliance with permit requirements may be passed on to consumers.	<u>Health and Safety</u> o Compliance with permit requirements would reduce health and safety hazards associated with solid waste. All other social impacts same as Action 4.1.
<u>Air Quality</u> o No impact. <u>Water Quality</u> o No impact. <u>Physical Resources</u> o Direct impacts on solid waste management associated with greater efficiency and less time involved in developing new and expanded facilities. <u>Energy</u> o No impact. <u>Amenities</u> o No impact.	<u>Financial</u> o Direct Cost-Public: (Administrative and regulatory costs) ABAG - 1978-2000 Total r= 6-3/8% \$12,587 r= 10% \$ 9,844 <u>Participating Regulatory Agencies -</u> 1978 Total for Region r= 6-3/8% \$ 428 r= 10% \$ 414 <u>Counties -</u> 1978 Total r= 6-3/8% \$ 102 r= 10% \$ 99 <u>Institutional</u> o Indirect impacts on solid waste management companies that would apply for permits-high acceptability. o Direct impact on permit procedures of county due to limited alterations. o Direct impacts due to allocation of county staff for assisting applicants in permit process. o Highly acceptable to developers of solid waste facilities.	<u>Direct Cost-Private</u> o Probable cost savings to private developer of solid waste facilities due to more efficient processing of permits. <u>Production of Goods and Services</u> o No impact. <u>Income and Investment</u> o Indirect impact on companies that must make capital investments for solid waste facilities due to increased efficiency of permit process and less time required. <u>Consumer expenditures</u> o No impact.	<u>Housing Supply</u> o No impact. <u>Physical Mobility</u> o No impact. <u>Health and Safety</u> o No impact. <u>Sense of Community</u> o No impact. <u>Equity</u> o No impact. <u>Urban Patterns</u> o No impact.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 5.2 Assign a staff member knowledgeable in solid waste management to assist applicants.	A knowledgeable staff member would be available at each County to assist an applicant in identifying the permit requirements.	County Solid Waste Management Agencies.	1/78 Ongoing	JPA for each County Solid Waste Management Agency.	\$ 600 ^a (\$7,600 ^a 1978-2000)	\$ 600 ^a (\$7,600 ^a 1978-2000)	County general funds, fees and surcharges.	
Action 5.3 Hold meetings prior to the public hearings.	Meet with the regulatory agency staffs and other participants as appropriate for discussion of project-related problems and for exchange of information. Initiated by coordination agency, responsible agencies or by applicant. Depending on the project, one of the following may be appropriate. 1. Discussion among staff only 2. Same, except applicant included. 3. Meeting could include staff, applicant, public and decision-makers.	County Solid Waste Management, ABAG, or other agencies, as appropriate.	Jan. 78; Continuous after Jan. 78.	JPA of ABAG.	\$ 3,400 ^a (\$40,000 ^a 1978-2000)	\$ 3,400 ^a (\$40,000 ^a 1978-2000)	ABAG dues; County general funds, fees and surcharges. Regulatory agencies operating funds.	Same as Action 5.1.

Policy 6

AGENCIES' EXISTING REGULATIONS, INCLUDING TIME LIMITS FOR REVIEW AND COMMENTS, SHOULD BE CLARIFIED AND ADDITIONAL ONES SHOULD BE ADOPTED WHERE NECESSARY TO FORMALIZE PROCEDURES USED IN PROCESSING OF OR COMMENTING ON APPLICATIONS.

Action 6.1

Clarify existing agency regulations that establish procedures for processing permit applications and adopt additional regulations, where necessary.

Existing procedures should be made understandable to other agencies and to applicants for permits. Where needed, formalize procedures including criteria for administrative vs. regular matters, application procedures, comments, hearings and appeal.

All permitting agencies (SSWMB, RWQCB, BAAPCD, BCDC, CCC, SLC, COE, Dept. of Health, local agencies).

Oct.-June 1978.
Enabling legislation of agencies.

\$ 1,500^a
(\$18,200^a 1978)

\$ 1,500^a
(\$18,200^a 1978)

County general funds, fees and surcharges; regulatory agencies operational funds.

Same as Action 5.1.

Action 6.2

Responsible agencies set and adhere to time limits, and commenting agencies adhere to time limits set by regulatory agencies.

All regulatory agencies should set definite time limits for permit processing; internal procedures should be geared to meet these deadlines.

Comments on projects should be sent to responsible agencies within time limits.

All permitting agencies (SSWMB, RWQCB, BAAPCD, BCDC, CCC, SLC, COE, Dept. of Health, local agencies).

1978
Enabling legislation of agencies.

0

0

County general funds, fees and surcharges; regulatory agencies operational funds.

Same as Action 5.1.

^a Public cost.

^b Private cost.

^c Public and private costs.

Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
Same as Action 5.1.	<u>Financial</u> o Direct Cost-Public: (Administrative and regulatory costs) County solid waste management agencies- 1978-2000 <u>Total For Region</u> r= 6-3/8% \$7625 r= 10% \$5737 (approx. \$650/year)	Same as Action 5.1.	Same as Action 5.1.
Same as Action 5.1.	<u>Financial</u> o Direct Cost-Public: (Administrative costs-holding meetings) All Agencies (8) - 1978-2000 <u>Total For Region</u> r= 6-3/8% \$ 39,639 r= 10% \$ 29,823 <u>Institutional</u> o Acceptable to private developers of new or expanded solid waste facilities and to involved public agencies. o Requires moderate cooperation among regulatory agencies and possible alteration of internal permit procedures.	Same as Action 5.1.	<u>Housing Supply</u> o No Impact. <u>Physical Mobility</u> o No Impacts. <u>Health and Safety</u> o No Impact. <u>Sense of Community</u> o Benefit to extent that meeting allows early public input and allows community issues to surface. <u>Equity</u> o No Impact. <u>Urban Patterns</u> o No Impacts.
Same as Action 5.1.	<u>Financial</u> o Direct Cost-Public: (Administrative and regulatory costs) Regional, State, Federal Agencies (7) 1978 <u>Total For Region</u> r= 6-3/8% \$ 4324 r= 10% \$ 4182 Counties (9) 1978 <u>Total For Region</u> r= 6-3/8% \$ 13,912 r= 10% \$ 13,454 <u>Institutional</u> o Very acceptable to private developers of new or expanded solid waste facilities and to involved public agencies.	<u>Direct Costs-Private</u> o Probable cost savings to private developers of solid waste facilities due to decreased processing time and more certainty in overall process. <u>Production of Goods and Services</u> o No Impact. <u>Income and Investments</u> o No Impact. <u>Consumer Expenditures</u> o No Impact.	Same as Action 5.1.
Same as Action 5.1.	<u>Financial</u> o Direct Cost-Public (Administrative and regulatory costs included in Action 6.1) <u>Institutional</u> o Indirect benefits to developers of solid waste facilities - high level of acceptability. o Possible impact on staffs of agencies associated with time necessary to develop time limits. o Impact on internal permit procedures due to stricter adherence to definite time limits.	Same as Action 6.1.	Same as Action 5.1.

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 7 PERMIT COORDINATION PROCEDURES FOR SOLID WASTE MANAGEMENT ACTIVITIES SHOULD BE INTEGRATED WITH OTHER COORDINATION PROJECTS IN THE FUTURE, AS APPROPRIATE.								
Action 7.1 Maintain contact with other agencies working on permit streamlining and inform them of experience gained in implementation of this process.	Contact should be maintained with agencies developing permit streamlining procedures, including the following: 1. OPR permit handbook 2. Resources Agency proposal 3. ABAG-OPR Industrial Siting 4. AB-884 5. Local governments.	ABAG	Ongoing	JPA of ABAG.	\$ 500 ^a (\$6,300 ^a 1978-1982)	\$ 500 ^a (\$6,300 ^a 1978-1982)	ABAG dues.	ABAG and local government advocacy.
Action 7.2 Work with other agencies to explore the possibility of legislative changes that would further streamline the permit approval process, if appropriate.	Legislative changes might affect the scope and extent of agencies' regulatory authority. They could occur in the context of the overall permit approval system.	ABAG	Ongoing	JPA of ABAG.	\$ 1,900 ^a (\$22,500 ^a 1978-1982)	\$ 1,900 ^a (\$22,500 ^a 1978-1982)	ABAG dues.	ABAG advocacy.
Policy 8 PUBLIC EDUCATION PROGRAMS ARE ESSENTIAL TO PROMOTE AWARENESS OF NEED FOR WASTE REDUCTION.								
Action 8.1 Federal and State governments should make funds available to support education program for promoting waste reduction.	Federal and State governments should fund education programs aimed at: o primary and secondary schools, o households, o stores and offices, and o manufacturing plants.	State and Federal governments.	Continuing	Federal and State Constitutions.	\$ 2,500 ^a (\$29,000 ^a 1978-2000)	\$ 2,500 ^a (\$29,000 ^a 1978-2000)	State and Federal funds. SB650 (1977).	After plan approval, EPA, SSWMB, Cities and Counties will adopt recommendations and will advocate State and Federal funding of education programs.
^a Public cost. ^b Private cost. ^c Public and private costs. Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.								

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> o No impact.	<u>Financial</u> o Direct Cost-Public: (Administrative costs-staff time to monitor)	<u>Direct Cost-Private</u> o No impact.	Same as Action 5.1.
<u>Water Quality</u> o No impact.	ABAG -	<u>Production of Goods and Services</u> o No impact.	
<u>Physical Resources</u> o No impact.	1978-1982 Total r= 6-3/8% \$ 6,255 r= 10% \$5,686	<u>Income and Investment</u> o No impact	
<u>Energy</u> o No impact.	<u>Institutional</u> o Possible Impact on overall permit procedure if integra- tion of solid waste coordina- tion and systems for other development activities occurs.	<u>Consumer Expenditures</u> o No impact.	
<u>Amenities</u> o No impact.			
Same as Action 7.1.	<u>Financial</u> o Direct Cost-Public: (Administrative costs)	Same as Action 7.1.	Same as Action 5.1.
	ABAG -		
	1978-1982 Total r= 6-3/8% \$ 6,255 r= 10% \$ 5,686		
	<u>Other Regional and State Agencies-</u>		
	1978-1982 Total r= 6-3/8% \$ 16,262 r= 10% \$ 14,784		
	<u>Institutional</u> o Possible significant beneficial impact on permit approval process. May result in significant institu- tional changes.		
<u>Air Quality</u> o Indirect impact resulting from shift in production practices and transporta- tion patterns.	<u>Financial</u> o Direct costs-public: (Administrative costs)	<u>Direct Costs-Private</u> o Indirect impact.	<u>Housing Supply</u> o No impact.
<u>Water Quality</u> o Indirect impact resulting from shift in production practices and transporta- tion patterns.	ABAG-	<u>Production of Goods and Services</u> o Employment- Possible benefit due to creation of jobs in developing and conducting the education programs.	<u>Physical Mobility</u> o No Impact.
<u>Physical Resources</u> o Solid Waste - Increased public awareness of problems related to solid waste. Indirect long- term impact, including reduced demands on landfill capacity, reduced demands on virgin material.	1978-2000 Total r= 6-3/8% \$14,573 r= 10% \$10,964 (\$1250/year)	o Potential significant long term benefit on types of goods produced; increased public awareness of the ill effects of the "throwaway" ethic; shift in production and marketing practices to encourage production of more durable goods, limit produc- tion of excess packaging and throwaway items, and change marketing emphasis.	<u>Health and Safety</u> o No impact.
<u>Amenities</u> o No Impact.	SSWMB-	<u>Income and Investment</u> o Indirect impact.	<u>Sense of Community</u> o No impact.
<u>Energy</u> o Indirect impact resulting from shift in production practices and transporta- tion patterns.	1978-2000 Total r= 6-3/8% \$14,573 r= 10% \$10,964 (\$1250/year)	<u>Consumer Expenditures</u> o Indirect impact.	<u>Equity</u> o No impact.
	o Federal and State govern- ments would have to pay the direct costs of funding the education programs.		<u>Urban Patterns</u> o No Impact.
	o Federal and State govern- ment agencies would have to bear costs of administering the funds.		
	<u>Institutional</u> o High degree of public ac- ceptance-school children, businesses and offices and manufacturing industries.		
	o Should beneficially affect public acceptance of future waste reduction programs.		

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 8.2 Provide public information packets on waste reduction. (This Action would include part of Actions 8.2, 8.4 and 8.15 of the Water Quality Management Plan.)	Describe and illustrate ways to reduce use and increase re-use of materials.	ABAG; SSWMB	Aug.- March 1978.	JPA of ABAG.	\$ 500 ^a (\$5,500 ^a 1978)	\$ 500 ^a (\$5,500 ^a 1978)	State General Fund. SB 650 (1977).	Plan adoption ensures ABAG implementation.
Action 8.3 Introduce classes on waste reduction. (This Action would include parts of Actions 8.2, 8.4 and 8.15 of the Water Quality Management Plan.)	Introduce school classes on waste reduction with assistance provided by SSWMB, ABAG, and local governments.	Local school districts.	Continuing.	Existing.	\$200,000 ^a (\$2,332,000 ^a 1978-2000)	\$200,000 ^a (\$2,332,000 ^a 1978-2000)	State and local funds.	Voluntary.

Policy 9

FEDERAL AND STATE GOVERNMENTS SHOULD ADOPT LEGISLATIVE AND ADMINISTRATIVE CHANGES WHICH PROMOTE WASTE REDUCTION.

Action 9.1	Changes in standards and regulations of manufacturing may be needed to:	U.S. Congress and Federal Administration:	Continuing.	Federal and State Constitutions.	0	0	State and Federal funds.	After plan approval, EPA, SSWMB, Cities, and counties will adopt recommendations and will advocate changes.
Change manufacturing standards and regulations, where appropriate.	<ul style="list-style-type: none"> o reduce excess packaging, o prohibit manufacture of certain products, such as disposable containers, o standardize containers, o limit number of container sizes, o increase service life of products, e.g., appliances, and o design criteria (such as modular components) to make repair more attractive than replacement. 	U.S. Congress and Federal Administration;	Continuing.	Federal and State Constitutions.	0	0	State and Federal funds.	After plan approval, EPA, SSWMB, Cities, and counties will adopt recommendations and will advocate changes.

Policy 10

FACILITATE REGIONWIDE COOPERATION IN DEVELOPING STABLE, ADEQUATE MARKETS FOR SECONDARY MATERIALS.

Action 10.1 Prepare and update listing of buyers.	Prepare listing of buyers of secondary materials which would include estimates, quantities, quality, and specifications on materials handled.	ABAG.	Continuing	JPA of ABAG.	\$ 500 ^a (\$58,000 ^a 1978-2000)	\$ 500 ^a (\$58,000 ^a 1978-2000)	State and Federal funds.	Plan adop- tion en- sures ABAG imple- mentation.
			■ Public cost.					
			b Private cost.					
			c Public and private costs.			Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.		

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Physical Resources</u> o Solid Waste- Possible impact by encouraging participation in recycling programs, reinforcing recycling practices, spurring involvement in solid-waste related issues. All other environmental impacts same as Action 8.1.	<u>Financial</u> o Direct Costs-Public: ABAG 1978 Total r= 6-3/8% \$ 5452 r= 10% \$ 5273 <u>Institutional</u> o Environmental groups including recycling centers would view favorably; positive effect on public acceptance of future programs.	<u>Direct Costs-Private</u> o Indirect impact. <u>Production of Goods and Services</u> o Indirect impact. <u>Income and Investments</u> o Indirect impact. <u>Consumer Expenditures</u> o Indirect impact.	Same as Action 8.1.
<u>Physical Resources</u> o Solid Waste- Short-term - would give students a greater understanding of how disposal and creation of wastes affect the environment. o Medium-term - Information and experiences would filter from schools to homes. 1. Could result in reduced use of highly packaged goods, throwaway items, and non-recyclables. 2. Participation in resource recovery programs. All other environmental impacts same as Action 8.1.	<u>Financial</u> o Direct Costs-Public School Districts 1978-2000 Total For Region r= 6-3/8% \$ 2,332,000 r= 10% \$ 1,754,000 (\$200,000/year for Region) <u>Institutional</u> o Indirect impact on public acceptance of waste reduction and resource recovery programs due to increased awareness. o These programs would be highly acceptable to environmental groups and possibly to consumer groups.	<u>Direct Costs-Private</u> o Indirect impact. <u>Production of Goods and Services</u> o Indirect impact. <u>Income and Investments</u> o Indirect impact. <u>Consumer Expenditures</u> o Long-term Indirect impact could be reduced expenditures on throwaway items, products in non-recyclable containers. o Preferences for more durable goods and products with less packaging could result.	Same as Action 8.1.
<u>Air Quality</u> o Indirect impact resulting from shift in production practices and transportation patterns. <u>Water Quality</u> o Indirect impact resulting from shift in production practices and transportation patterns. <u>Physical Resources</u> o Solid Wastes - Probable impact - implementation of these changes by industry would reduce quantities of wastes produced in manufacturing practices; reduce generation of packaging materials; make recovery of certain products more feasible; and permit increased use of secondary materials, and products containing secondary materials, in manufacturing processes. <u>Energy</u> o Indirect impact resulting from shift in production practices and transportation patterns.	<u>Financial</u> o Direct Costs-Public: The Federal and State governments would bear administrative costs involved in changing standards and regulations; part of regular function. <u>Institutional</u> o Public acceptance -Changes in certain standards and regulations may be opposed by affected industries. -Environmental groups and organizations (both private and public) involved in resource recovery would view these changes with favour. o Political and organizational feasibility - -Officials with significant urban industrial constituencies may be unwilling to advocate these changes.	<u>Direct Costs - Private</u> o For compliance with new standards, Industries may bear costs of: -Changes in packaging design -Changes in operational practices, and -Changes in product design. These costs may be offset to some extent by reduced waste disposal costs or may be passed on to the consumer. <u>Production of Goods and Services</u> o Will alter design and packaging of goods. <u>Income and Investment</u> o Possible impact on capital investments-some industries may require new equipment. Impact would be industry-specific. <u>Consumer Expenditures</u> o Probable increase in cost of some products.	<u>Housing Supply</u> o No impact. <u>Physical Mobility</u> o No impact. <u>Health and Safety</u> o No impact. <u>Sense of Community</u> o No impact. <u>Equity</u> o No impact. <u>Urban Patterns</u> o No impact.
<u>Air Quality</u> o No impact. <u>Water Quality</u> o No impact. <u>Physical Resources</u> o Solid Waste- Possible increased viability of resource recovery activities if market for secondary goods is established or expanded. <u>Energy</u> o No impact. <u>Amenities</u> o No impact.	<u>Financial</u> o Direct Cost-Public: (Administrative Costs) ABAG- 1978 Total r= 6-3/8% \$58,287 r= 10% \$43,851 <u>Institutional</u> o Increased acceptability of recycling with potential buyers. o Direct impact on groups involved in recycling due to increased awareness and participation by public.	<u>Direct Cost-Private</u> o No impact. <u>Production of Goods and Services</u> o Possible increase in flow of goods from recycling centers or other resource recovery projects to secondary materials buyers. Possible impact on production of goods containing secondary materials. <u>Income and Investments</u> o No impact. <u>Consumer Expenditures</u> o No impact.	Same as Action 9.1.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 10.2 Provide forum for coordination.	Organize meetings for representatives of recycling centers, local governments, citizen groups, secondary markets, and private enterprise.	ABAG.	Ongoing.	JPA of ABAG.	\$1,600 ^a (\$19,000 ^a 1978-2000)	\$1,600 ^a (\$19,000 ^a 1978-2000)	State and Federal funds.	Plan adoption ensures ABAG implementation.
Policy 11 FEDERAL AND STATE GOVERNMENTS SHOULD ADOPT LEGISLATIVE AND ADMINISTRATIVE CHANGES TO IMPROVE COMPETITIVE POSITIONS OF SECONDARY MATERIALS AND PRODUCTS CONTAINING SECONDARY MATERIALS.								
Action 11.1 Change existing Federal and State laws and regulations to improve competitive positions of secondary materials and products containing secondary materials.	Change existing Federal and State laws and regulations in the following areas: <ul style="list-style-type: none"> o Change tax laws to eliminate favored status of virgin materials. o Introduce Federal surtaxes or disposal charges on prices of virgin materials. o Reform Interstate Commerce Commission's rate structure to establish favorable competitive position for secondary materials. o Require certain percentage of secondary material to be contained in specific products, where feasible, and set maximum permissible quantities of virgin materials in specific products. 	U.S. Congress and Federal administration.	As soon as possible.	Federal and State constitutions.	0	0	Federal and State funds.	After plan approval, EPA, SSWMB, cities, and counties will adopt recommendations and will advocate changes.
Action 11.2 Adopt preferential purchasing policies for secondary materials, where appropriate.	Policies would favour purchase of products containing secondary materials.	ABAG; Regional Agencies; local governments.	As soon as possible.	Local governments enabling legislation.	\$16,000 ^a (\$190,000 ^a 1978)	\$16,000 ^a (\$190,000 ^a 1978)	None needed.	Plan approval by implementing agencies will ensure adoption of policies.
<p>^a Public cost.</p> <p>^b Private cost.</p> <p>^c Public and private costs.</p> <p>Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.</p>								

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> o No Impact. <u>Water Quality</u> o No Impact. <u>Physical Resources</u> o Could modify solid waste management practices in the long-term; extent of this impact is not quantifiably predictable. <u>Energy</u> o No Impact. <u>Amenities</u> o No Impact.	<u>Financial</u> o Direct Cost-Public: (Administrative Costs) <u>ABAG-</u> 1978-2000 Total r= 6-3/8% \$ 18,654 r= 10% \$ 14,034 (\$1600/year) <u>Institutional</u> o Would directly impact groups and industries involved in resource recovery and in disposal, transportation or collection of municipal solid wastes. Probably be viewed favorably by the various groups and industry. It is a necessary step in modifying solid waste management practices.	<u>Direct Cost-Private</u> o No Impact. <u>Production of Goods and Services</u> o No Impact. <u>Income and Investments</u> o No Impact. <u>Consumer Expenditures</u> o No Impact.	Same as Action 9.1.
<u>Air Quality, Water Quality, Energy</u> o Indirect impact resulting from shift in production practices and transportation patterns. <u>Physical Resources</u> o Direct beneficial impact on solid waste. o Possible expansion of resource recovery programs. o Possible long-term reduction of demands on timber and mineral resources. <u>Amenities</u> o No Impact.	<u>Financial</u> o Direct Costs-Public: Federal and State government agencies would have administrative costs involved in changing laws and regulations; part of normal operations. <u>Institutional</u> o Public Acceptance-viewed favorably by environmental groups, secondary materials industry, and most persons involved in resource recovery. o Industries, particularly the extractive industries would likely be opposed to the change in competitive position of their goods. o Implementation-due to industrial opposition, these recommended changes may be difficult to implement.	<u>Direct Cost-Private</u> o Possible costs of shifting from use of virgin to use of secondary materials. <u>Production of Goods and Services</u> o The change in costs of secondary materials could shift production practices from use of primary materials to use of secondary. <u>Income and Investments</u> o Possible investment in equipment to shift production practices. <u>Consumer Expenditures</u> o Probable impact on prices. Could reduce costs of transporting secondary materials or products containing secondary materials.	Same as Action 9.1.
<u>Air Quality</u> o Indirect impact resulting from shift in production practices and transportation patterns. <u>Water Quality</u> o Indirect impact resulting from shift in production practices and transportation patterns. <u>Physical Resources</u> o Solid Waste - Direct effect on secondary materials markets; would indirectly affect recycling and resource recovery programs. <u>Energy</u> o Indirect impact resulting from shift in production practices and transportation patterns. <u>Amenities</u> o No Impact.	<u>Financial</u> o Direct Costs-Public: (Administrative Costs) <u>Participating Agencies (89)</u> 1978 Total For Region r= 6-3/8% \$ 189,938 r= 10% \$ 183,679 <u>Institutional</u> o Highly acceptable to recyclers and producers of secondary goods. o Could meet with opposition by producers of goods using virgin materials.	<u>Direct Costs-Private</u> o Indirect impact. <u>Production of Goods and Services</u> o Indirect impact. <u>Income and Investments</u> o Indirect impact. <u>Consumer Expenditures</u> o Indirect impact.	Same as Action 9.1.

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 12								
ALL LEVELS OF GOVERNMENTS SHOULD ENCOURAGE DEVELOPMENT OF SOURCE SEPARATION PROGRAMS.								
Action 12.1 Provide information and assistance on source separation. (This Action would include part of Action 8.2 of the Water Quality Management Plan.)	Facilitate efforts of local governments, citizen groups, and collection companies by offering technical advice, contacting secondary material buyers, and by providing a forum for coordination of these efforts.	ABAG. SSWMB.	Ongoing. Ongoing.	JPA of ABAG. SB-5	\$7,800 ^a (\$91,000 ^a 1978-2000)	\$7,800 ^a (\$91,000 ^a 1978-2000)	Dues, State and Federal grants. State General Funds.	Plan approval will ensure implementation.
Action 12.2 Fund demonstration projects on source separation at the local, State and Federal level. (This Action would include part of Action 8.2 of the Water Quality Management Plan.)	State and Federal legislatures should provide funding for demonstration source separation and recycling projects, including oil recovery.	State and Federal Legislature.	Ongoing.	SB650 (1977), SB68 (1977).	\$254,000 ^a (\$3,000,000 ^a 1978-1982)	\$254,000 ^a (\$3,000,000 ^a 1978-1982)	State and Federal funds. SB650 (1977), CPCFCA.	ABAG, SSWMB, and local governments will advocate funding for demonstration projects.
Action 12.3 Establish office paper recycling program.	Data and experience of the public agency programs would be used to expand recycling into the private sector.	ABAG & other regional agencies; Local gov'ts.	August 77 (ABAG)	JPA of ABAG; \$ 3,900 ^a agencies' enabling legislation.	\$ 3,900 ^a (\$45,000 ^a 1978)	\$ 3,900 ^a (\$45,000 ^a 1978)	Sales of used paper.	ABAG will start a program.
Action 12.4 Adopt resolutions supporting existing community source separation and recycling programs. (This Action would include part of Action 8.2 of the Water Quality Management Plan.)	These resolutions would: acknowledge on-going efforts (such as voluntary recycling centers, school use of industrial scrap materials (Bay Area Creative Recycle), etc), encourage involvement in these programs and establish policies supporting new programs.	City Councils; Boards of Supervisors; School district boards; County Solid Waste Management Authorities.	As soon as possible.	Local governments enabling legislation. Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.	\$ 900 ^a (\$10,000 ^a 1978)	\$ 900 ^a (\$10,000 ^a 1978)	None needed. ^a Public cost. ^b Private cost. ^c Public and private costs.	ABAG will advocate.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality, Water Quality, Energy</u> o Indirect impact resulting from shift in production practices and transportation patterns. <u>Physical Resources</u> o Possible indirect benefits- Communities may develop or increase resource recovery activities if provided with information. <u>Amenities</u> o No Impact.	<u>Financial</u> o Direct Cost-Public: (Administrative Costs) ABAG- 1978-2000 Total r= 6-3/8% \$ 90,938 r= 10% \$ 68,418 (\$7800/year) <u>Funding Agencies</u> (Federal and State Government would pay direct costs of funding the programs.) 1978-1979 Total r= 6-3/8% \$2,953,648 r= 10% \$2,811,574 (\$1,620,000 per year for Region) ABAG- 1978-1983 Total r= 6-3/8% \$5212 r= 10% \$4738 <u>Institutional</u> o Public Acceptance - Environmental groups and companies or individuals involved in resource recovery should view this action positively.	<u>Direct Cost-Private</u> o Indirect impact. <u>Production of Goods and Services</u> o Indirect impact. <u>Income and Investments</u> o Indirect impact. <u>Consumer Expenditures</u> o Indirect impact.	<u>Housing Supply</u> o No Impact. <u>Physical Mobility</u> o No Impact. <u>Health and Safety</u> o No Impact. <u>Sense of Community</u> o Possible indirect impact on sense of community due to common purpose. <u>Equity</u> o No Impact. <u>Urban Patterns</u> o No Impact.
<u>Physical Resources</u> o Significant impacts in communities with the demonstration projects: 1) reduced waste generation, and 2) increased recycling. o Possible indirect long-term impacts on physical resources. Demands on mineral and timber resources could be reduced. All other environmental impacts are same as Action 12.1.	<u>Financial</u> o Direct Costs-Public: (Administrative Costs) <u>Funding Agencies</u> (Federal and State Government would pay direct costs of funding the programs.) 1978-1979 Total r= 6-3/8% \$2,953,648 r= 10% \$2,811,574 (\$1,620,000 per year for Region) ABAG- 1978-1983 Total r= 6-3/8% \$5212 r= 10% \$4738 <u>Institutional</u> o Public Acceptance - Environmental groups and companies or individuals involved in resource recovery should view this action positively.	<u>Direct Costs-Private</u> o Indirect impact. <u>Production of Goods and Services</u> o Employment- Possible increase in jobs in communities with demonstration projects. <u>Income and Investments</u> o New programs may require communities to invest in some equipment. o Federal and State support of these programs may encourage private investment in resource recovery operation. <u>Consumer Expenditures</u> o Indirect impact.	<u>Housing Supply</u> o No Impact. <u>Physical Mobility</u> o No Impact. <u>Health and Safety</u> o No Impact. <u>Sense of Community</u> o Possible impact on sense of community associated with common purpose. <u>Equity</u> o Changes in Lifestyle- Community Involvement in resource recovery requires some minor changes in daily lifestyle of its residents. <u>Urban Patterns</u> o No Impact.
<u>Physical Resources</u> o Minor Impact by reduction of total amount of waste that requires disposal. o Potential long-term impact of reducing demands on timber resources. All other environmental impacts are same as Action 12.1.	<u>Financial</u> o Direct Cost-Public: (Administrative Costs) <u>Participating Agencies (80)-</u> 1978 Total r= 6-3/8% \$ 44,935 r= 10% \$ 43,455 <u>Institutional</u> o Public acceptability - Possible indirect impact if program is perceived as a nuisance. o Increased public awareness of recycling; future programs more acceptable.	<u>Direct Cost-Private</u> o No Impact. <u>Production of Goods and Services</u> o Could alter production practices to favor greater use of secondary fibers. <u>Income and Investments</u> o No Impact. <u>Consumer Expenditures</u> o May slightly reduce demand for new paper in the long term.	<u>Housing Supply</u> o No Impact. <u>Physical Mobility</u> o No Impact. <u>Health and Safety</u> o No Impact. <u>Sense of Community</u> o No Impact. <u>Equity</u> o No Impact. <u>Urban Patterns</u> o No Impact.
<u>Physical Resources</u> o More immediate, direct benefits may accrue to current recycling efforts in form of increased participation, increased publicity, and increased acceptance. All other environmental impacts are same as Action 12.1.	<u>Financial</u> o Direct Costs-Public: (Administrative Costs) <u>Local Governments (50) -</u> 1978 Total r= 6-3/8% \$ 10,247 r= 10% \$ 9,909 (about \$200 per agency) <u>Institutional</u> o Public Acceptance - Positive effect on public acceptance of concept of recycling.	Same as Action 12.1.	Same as Action 12.1.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 13								
ADEQUATE PLANNING FOR HAZARDOUS WASTE MANAGEMENT REQUIRES ACCURATE DATA.								
Action 13.1 Conduct surveys of hazardous industrial wastes.	Survey the amount of hazardous industrial waste currently being generated, what these materials are and how they are currently being disposed of.	Counties with assistance from State Dept. of Health and ABAG.	By April 1978.	RCRA Sec. 3002(6) ; State Hazardous Waste Control Act.	\$ 6,400 ^a (\$75,000 ^a 1978-79) \$1,400 ^b (\$16,000 ^b 1978-79)	\$ 6,400 ^a (\$75,000 ^a 1978-79) \$1,400 ^b (\$16,000 ^b 1978-79)	RCRA; SWMB; BASWMP Phase II; local matching funds (incl. in-kind services).	After plan approval, cities and counties will adopt recommendations; Agreement to be negotiated between ABAG and State Health Dept.
Action 13.2 Conduct surveys of hazardous hospital wastes.	Survey the amount of infectious or pathological waste currently being generated, what these materials are, and how they are currently being disposed of.	Counties with assistance of State Health Dept. and ABAG.	By April 1980.	Proposed State Hazardous Waste Control Act Amendments.	\$ 400 ^a (\$4,900 ^a 1979-80) \$100 ^b (\$900 ^b 1979-80)	\$ 400 ^a (\$4,900 ^a 1979-80) \$100 ^b (\$900 ^b 1979-80)	RCRA; SWMB; BASWMP Phase II; with local matching funds (incl. in-kind services)	Agreement to be negotiated between ABAG and State Health Dept.
^a Public cost. ^b Private cost. ^c Public and private costs. Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.								

ENVIRONMENTAL IMPACTS

INSTITUTIONAL/FINANCIAL IMPACTS

ECONOMIC IMPACTS

SOCIAL IMPACTS

Air Quality

- o No Impact.

Water Quality

- o No Impact.

Physical Resources

- o Possible Indirect impacts due to ability to determine need for future Class 1 sites.
- o Indirect impact-possible decrease in illegal dumping of hazardous wastes.

Energy

- o No Impact.

Amenities

- o No Impact.

Financial

- o Direct Cost-Public:
(Administrative and regulatory costs)

State Dept. of Health-

1978-1979	Total
r= 6-3/8%	\$ 16,013
r= 10%	\$ 15,238

Counties (9)

1978-1979	Total
r= 6-3/8%	\$ 59,456
r= 10%	\$ 56,579

Institutional

- o Direct Impact on industrial generators of hazardous wastes due to perceived intrusion into industry practices.
- o Minor temporary impact on County staff due to staff commitment to conduct surveys.

Direct Cost-Private

- o Minor temporary interruption in normal operations to supply information to County surveyors.

Hazardous Waste Generators-

1978-1979	Total
r= 6-3/8%	\$ 16,013
r= 10%	\$ 15,238

Production of Goods and Services

- o No Impacts.

Income and Investments

- o No Impact.

Consumer Expenditures

- o No Impact.

Housing Supply

- o No Impact.

Physical Mobility

- o No Impact.

Health and Safety

- o Possibility of indirectly leading to less contact with dangerous materials.

Sense of Community

- o No Impact.

Equity

- o No Impact.

Urban Patterns

- o No Impact.

Physical Resources

- o Indirect minor impacts due to greater preprocessing for disposal to sewers and therefore reduce use of landfill sites.

All other environmental impacts same as Action 13.1.

Financial

- o Direct Cost-Public:
(Administrative Costs)

State Dept. of Health

1979-1980	Total
r= 6-3/8%	\$ 2006
r= 10%	\$ 1863

Counties-

1979-1980	Total
r= 6-3/8%	\$ 2856
r= 10%	\$ 2629

Institutional

- o Direct Impact on hospital administrators due to perceived inconvenience of supplying information.
- o Impact on legal capability since requires amendment to State Hazardous Waste Control Act (in process).
- o Direct temporary impact on allocation of staff due to staff commitment to conduct surveys.

Direct Cost-Private

- o Minor temporary interruption in normal operations to supply information to County surveyors.

Hospital Administrators-

1979-1980	Total
r= 6-3/8%	\$ 857
r= 10%	\$ 789

All other economic impacts same as Action 13.1.

Same as Action 13.1.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 13.3 Determine whether there is a need for additional Class I site capacity	Determine whether or not additional Class I sites are needed in the Bay Area. Determine waste quantities that can be handled at each existing Class I site.	State Health Dept. in conjunction with RWQCB, ABAG and the counties.	Ongoing.	AB 1573 (1977); AB 598 (1972).	\$ 1,800 ^a (\$21,000 ^a 1979)	\$ 1,800 ^a (\$21,000 ^a 1979)	SWMB Grant.	After plan approval cities and counties will adopt recommendations.
Policy 14 WASTE REDUCTION, SOURCE SEPARATION, AND RECOVERY OF HAZARDOUS INDUSTRIAL WASTES SHOULD BE PROMOTED IN THE INTEREST OF LIMITING LAND DISPOSAL.								
Action 14.1 Encourage waste reduction.	Encourage industry to make changes in its processes to reduce the amount of hazardous waste generated.	ABAG, State Dept. of Health and RWQCB.	Ongoing.	AB 1593 (1977).	\$13,000 ^a (\$152,000 ^a 1978-2000)	\$13,000 ^a (\$152,000 ^a 1978-2000)	RCRA; State funds; CPCFA.	Agreement to be negotiated between ABAG and State Health Dept.
^a Public cost. ^b Private cost. ^c Public and private costs. Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.								

ENVIRONMENTAL IMPACTS

(Impacts are contingent on the determination that a site is needed. Also impacts are site specific).

Air Quality

- o Indirect impact; solar evaporation ponds may have some odor. Extent of the odor depends on how well the site is operated. Burial activities may lead to increased dust.

Water Quality

- o Indirect Impact: If site is established to replace an existing site with water quality problems.

Physical Resources

- o There may be indirect impacts on flora and fauna, agricultural land, mineral extraction and timber lands. Effects could be minimized in the site selection process.
- o Indirect impacts due to shifts in the routes traveled by waste trucks, need for a new transfer station, and volumes of waste disposed of at existing Class I sites.

Energy

- o No impact.

Amenities

- o Reduction of the visual amenities of the chosen site.
- o Site preparation activities, traffic associated with disposal, and on-site operations would result in increased noise levels.

INSTITUTIONAL/FINANCIAL IMPACTS

Financial

- o Direct Cost-Public:
(Administrative Costs)

ABAG-

1979	Total
r= 6-3/8%	\$ 4419
r= 10%	\$ 4132

Counties (9)

1979	Total For Region
r= 6-3/8%	\$16,567
r= 10%	\$15,493

- o If financed publicly, site may be financed by local government bonds or increases in property taxes.
- o If the site is private, it would establish an additional industry to be taxed.
- o Probable revenue to the jurisdiction from development and construction fees.

Institutional

- o Unknown indirect impact on existing Class I site operators due to competition. Possible reaction of communities depending on the locations of site(s) which could lead to poor public acceptability.
- o ABAG and Counties may have difficulties in making this decision due to its sensitive nature.
- o County staff may be shifted from other duties to work on this study.

ECONOMIC IMPACTS

Direct Cost-Private

- o No Impact.

Production of Goods and Services

- o Indirect impact on the number and location of industries that depend on Class I sites for disposal of their hazardous wastes.

- o Employment - Temporary construction employment and more permanent employment in operating the site could result.

Income and Investments

- o Property chosen for site could increase in value; surrounding property could decrease in value.
- o Indirect impact on capital investments by requiring an investment in land and equipment for Class I sites by the owner or operator of the facility(s).
- o Possible indirect impact on the profits of existing competing Class I site owners and operators since revenue would be spread to include the new site(s).

Consumer Expenditures

- o Indirect impact on disposal rates at Class I sites related to profits of site owners and operators.

SOCIAL IMPACTS

Health and Safety

- o The decision would help ensure disposal capacity of Group 1 (hazardous) wastes and therefore have an indirect, moderate, beneficial impact on public health.

Urban Patterns

- o Possible Indirect impact on land use by restricting use of site and adjacent areas.

All other social impacts same as Action 13.1.

Air Quality

- o There would be an indirect impact on dust and odors due to reduced need for land disposal.

Water Quality

- o There may be an indirect impact on water quality due to reduced need for land disposal.

Physical Resources

- o Direct impact on solid waste by changing industrial practices, thereby reducing wastes.
- o Indirect impacts on solid waste by reducing quantity of hazardous wastes generated, by reducing volume required for storage, collection, and hauling, by prolonging life of existing Class I sites and reducing need for additional sites.
- o Possible indirect impact on raw materials due to reduced consumption.

Energy

- o Possible changes in the use of energy. Impact cannot be predicted.

Amenities

- o No impact.

Financial

- o Direct Cost-Public:

ABAG-

1978-2000	Total
r= 6-3/8%	\$ 29,147
r= 10%	\$ 21,929

(staff time - \$2,500/year)

State Department of Health-

1978-2000	Total
r= 6-3/8%	\$ 122,416
r= 10%	\$ 92,101

(staff time - \$10,000/year)

Institutional

- o May be unpopular with generators due to perceived costs and reluctance to change; popular with environmental groups.
- o Legal capability of the State Dept. of Health to aggressively encourage waste reduction is uncertain.
- o Direct impact on State Health Dept. staff due to staff commitment to help industry.

Direct Cost-Private

- o Indirect short-term cost of modifying processes and plants; long-term reduction of disposal costs.

Production of Goods and Services

- o Short-term indirect impact as process changes are made; long-term impact as savings are realized.

Income and Investment

- o Possible minor to significant investments by industry in new equipment depending on commitment to waste reduction and type of process involved.
- o Possible short-term reduction of profits due to investments and long-term increases in profit due to reduction of disposal fees for industrial generators of hazardous wastes.

Consumer Expenditures

- o Possible indirect benefits in cost savings for consumer.

Housing Supply

- o No Impact.

Physical Mobility

- o No Impact.

Health and Safety

- o Indirect impact on public health by reducing the amount of hazardous wastes to be managed.

Sense of Community

- o No impact.

Equity

- o No impact.

Urban Patterns

- o No Impact.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 14.2 Encourage source separation.	Encourage industry to avoid mixing wastes to facilitate recycling.	State Health Dept.; ABAG.	Ongoing.	AB 1593 (1977).	\$13,000 ^a (\$152,000 ^a 1978-2000)	\$13,000 ^a (\$152,000 ^a 1978-2000)	RCRA; State funds; SB 650.	Agreement to be negotiated between ABAG and State Health Dept.
Action 14.3 Encourage resource recovery.	Provide incentives to industry for resource recovery, such as:	Congress, EPA, State Legislature:		U.S. Constitution, State Constitution and:	\$18,000 ^a (\$181,000 ^a 1978-2000)	\$18,000 ^a (\$181,000 ^a 1978-2000)		Agreements to be negotiated between ABAG and State Health Dept. and the Solid Waste Management Board to ensure implementation.
	o low interest loans for new equipment	State Health Dept.; SWMB.	Ongoing.	Legal authority for implementing agencies			RCRA and CPCFA funds.	
	o a State-wide waste exchange and marketing system	State Health Dept.	Ongoing.	State Health Dept.; RCRA and State Hazardous Waste Control Act.			RCRA; State funds, CPCFA.	
	o information dissemination through business associations	ABAG; State Health Dept.	Ongoing.				State funds.	
	o guidance to industry on reusing waste.	State Health Dept.	Ongoing.	SSWMB: RCRA and SB 5.			RCRA; State funds.	
	o charges to dispose of materials at Class I sites with exemptions for installations with recovery equipment.	State Health Dept.	Ongoing.	ABAG: HUD designation as regional planning agency, OMB Circular A-95 designation, Section 208 of FWPCA. Amendments.			RCRA; State funds.	
<p>^a Public cost.</p> <p>^b Private cost.</p> <p>^c Public and private costs.</p> <p>Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.</p>								

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS																				
<u>Physical Resources</u> <ul style="list-style-type: none">o Direct Impact on solid waste by changing industrial operating practices thereby encouraging separation of wastes.o Indirect impacts on solid waste may alter the way hazardous wastes are collected, increase the amount of recovered materials available, increase the life of existing Class 1 sites, reduce the need for more Class 1 sites.o Possible reduction in consumption of raw materials. All other environmental impacts same as Action 14.1.	<u>Financial</u> <ul style="list-style-type: none">o Direct Cost-Public: <table><tr><td colspan="2">ABAG-</td></tr><tr><td>1978-2000</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 29,147</td></tr><tr><td>r= 10%</td><td>\$ 21,929</td></tr><tr><td colspan="2">(staff time - \$2,500/year)</td></tr></table> <table><tr><td colspan="2">State Department of Health-</td></tr><tr><td>1978-2000</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 122,416</td></tr><tr><td>r= 10%</td><td>\$ 92,101</td></tr><tr><td colspan="2">(staff time - \$10,000/year)</td></tr></table> <u>Institutional</u> <ul style="list-style-type: none">o Same as Action 14.1.	ABAG-		1978-2000	Total	r= 6-3/8%	\$ 29,147	r= 10%	\$ 21,929	(staff time - \$2,500/year)		State Department of Health-		1978-2000	Total	r= 6-3/8%	\$ 122,416	r= 10%	\$ 92,101	(staff time - \$10,000/year)		<u>Production of Goods and Services</u> <ul style="list-style-type: none">o Indirect impact on production since it may result in greater use of recycled materials.o Employment- Indirect impact on employment due to slight increase in time spent in separating materials. <u>Income and Investment</u> <ul style="list-style-type: none">o Indirect impacts on capital since may result in small investment to purchase facilities to collect and store recyclable wastes separately.o Possible short-term reduction of profits due to necessary investments; long-term increases from decreased costs for disposal and for raw materials. All other economic impacts same as Action 14.1.	Same as Action 14.1.
ABAG-																							
1978-2000	Total																						
r= 6-3/8%	\$ 29,147																						
r= 10%	\$ 21,929																						
(staff time - \$2,500/year)																							
State Department of Health-																							
1978-2000	Total																						
r= 6-3/8%	\$ 122,416																						
r= 10%	\$ 92,101																						
(staff time - \$10,000/year)																							

<u>Physical Resources</u>	<u>Financial</u>	<u>Direct Cost-Private</u>	Same as Action 14.1.
o Direct Impact on solid waste by changing industrial operating practices thereby encouraging resource recovery.	o Direct Cost-Public: (Administrative and regulatory costs)	o Same as Action 14.1.	
	<u>ABAG-</u>	<u>Production of Goods and Services</u>	
	1978-2000	o Indirect Impact on production due to less use of virgin materials.	
	r= 6-3/8%		
	r= 10%	o Employment- Indirect impacts on employment by slightly increasing jobs at resource recovery facilities and decreasing jobs in production of virgin materials- possible net job increase.	
	(staff time - \$2,500/year)		
	<u>State Department of Health</u>		
	1978-2000		
	r= 6-3/8%		
	r= 10%		
	(staff time - \$10,000/year)		
	<u>SSWMB</u>	<u>Income and Investments</u>	
	1978-2000	o Indirect impacts on capital since results in purchasing resource recovery facilities by industries that generate hazardous wastes.	
	r= 6-3/8%		
	r= 10%	o Possible short-term reduction of profits due to investments; long-term increases from decreased costs for disposal and for raw materials.	
	(staff time - \$5,000/year)		
	<u>Institutional</u>	<u>Consumer Expenditures</u>	
	o Unpopular with generators due to perceived costs and reluctance to change; popular with environmentalists; any tax law changes could be controversial.	o Unknown indirect impact on cost related to indirect cost to industry.	
	o Possibly complex to implement. Measures may require the initiative of three implementing agencies.	o Less virgin materials; more reclaimed materials (indirect).	
	o Some incentives may require enabling legislation. (Especially any tax law changes.)		
	o Direct impact on SHD, SSWMB, and ABAG staff due to commitment to help industry.		

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 14.4 Investigate the consolidation of hazardous wastes for processing.	Investigate the possibility of waste consolidation to facilitate waste processing and recovery.	State Health Dept.; ABAG.	Ongoing.	JPA of ABAG.	\$ 3,000 ^a (\$30,000 ^a 1979)	\$ 3,000 ^a (\$30,000 ^a 1979)	RCRA; State funds.	Agreement to be negotiated between ABAG and State Health Dept.
Policy 15 REGULATIONS SHOULD ENSURE SAFE AND PROPER HANDLING OF HAZARDOUS WASTES.								
Action 15.1 Enforce <u>proper</u> labeling requirements.	Require that containers used for the storage, transport, or disposal of hazardous waste accurately identify their contents.	EPA; State Health Dept.	Ongoing.	RCRA Sec. 3002 (2); State Hazardous Waste Control Act; AB 1593 (1977).	NA	0	RCRA; State funds.	Required by existing Statute; EPA will enforce.
Action 15.2 Enforce adequate storage facilities requirements.	Require that containers used for onsite storage and for disposal be made of proper materials and designed so as to minimize the hazards of leaking or breaking.	EPA; State Health Dept.	Ongoing.	RCRA Sec. 3002 (3); State Hazardous Waste Control Act; AB 1593 (1977).	NA	0	RCRA; State funds.	Required by existing Statute; EPA will enforce.
Action 15.3 Enforcement requirements for adequate record-keeping practices by waste generators.	Require that recordkeeping practices accurately identify the type and the quantity of hazardous waste generated.	EPA; State Health Dept.		RCRA Sec. 3002 (1); AB 1593 (1977).	NA	0	RCRA; State funds.	Required by existing Statute; EPA will enforce.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> o No Impact. <u>Water Quality</u> o No Impact. <u>Physical Resources</u> o Indirect impacts on solid waste may include increased feasibility of resource recovery, more pilot programs, decreased amount of hazardous wastes going to Class 1 sites (thereby increasing the life of existing sites and reducing the need for new sites). o Indirect impacts may include necessitating changes in collection and transportation systems. <u>Energy</u> o No Impact. <u>Amenities</u> o No Impact.	<u>Financial</u> o Direct Cost-Public: (Administrative costs) ABAG- 1979 Total r= 6-3/8% \$ 2209 r= 10% \$ 2066 <u>Department of Health</u> 1979 Total r= 6-3/8% \$ 27,838 r= 10% \$ 26,033 <u>Institutional</u> o The legal capability of the State Health Department and ABAG to conduct an <u>in depth</u> study is uncertain. o Direct impact on allocation of State Health Department and ABAG staff due to commitment to help industry.	<u>Direct Cost-Private</u> o No impact. <u>Production of Goods and Services</u> o No impact. <u>Income and Investment</u> o No impact. <u>Consumer Expenditures</u> o No impact.	<u>Housing Supply</u> o No Impact. <u>Physical Mobility</u> o No Impact. <u>Health and Safety</u> o No Impact. <u>Equity</u> o No impact. <u>Sense of Community</u> o No Impact. <u>Urban Patterns</u> o No Impact.
<u>Air Quality</u> o No Impact. <u>Water Quality</u> o No Impact. <u>Physical Resources</u> o Direct impact on solid waste. Less likelihood of accidents or human error in storage, handling or disposal of hazardous wastes; eases clean-up should spill occur during transport. o Indirect benefit for source separation programs. <u>Energy</u> o No impact. <u>Amenities</u> o No impact.	<u>Financial</u> o Direct Cost-Public: Enforcing proper labeling; EPA and State Health Department staff time. (Standards have not been set; cost estimates not available.) <u>Institutional</u> o Direct impact on public acceptance; unpopular with some generators of hazardous wastes due to costs of compliance.	<u>Direct Cost-Private</u> o Cost of labels, when needed <u>Production of Goods and Services</u> o No impact. <u>Income and Investment</u> o Direct impact on investment for labeling equipment if needed. <u>Consumer Expenditures</u> o No impact.	<u>Housing Supply</u> o No impact. <u>Physical Mobility</u> o No Impact. <u>Health and Safety</u> o Indirect impact on public health; increases safety in handling of wastes by decreasing the likelihood of accidents and mistakes during handling. <u>Equity</u> o No impact. <u>Sense of Community</u> o No Impact. <u>Urban Patterns</u> o No Impact.
<u>Air Quality</u> o May have effect on reducing odor and dust. <u>Water Quality</u> o No impact. <u>Physical Resources</u> o Direct impact on solid waste; increases safety of storage conditions. <u>Energy</u> o No impact. <u>Amenities</u> o No impact.	<u>Financial</u> o Direct Cost-Public: enforcing requirement; EPA and State Health Department staff time. (Standards have not yet been set; cost estimates not available.) <u>Institutional</u> o Direct impact on public acceptance unpopular with some generators of hazardous wastes due to costs of compliance; more likely to affect small industries (since most large generators already have adequate facilities.)	<u>Direct Cost-Private</u> o Cost of better storage facilities, when needed. <u>Production of Goods and Services</u> o No impact. <u>Income and Investment</u> o Direct impact on investment for purchasing and installing new storage facilities, when needed. <u>Consumer Expenditures</u> o No impact.	<u>Health and Safety</u> o Indirect impact on public health since increases safety while storing wastes by reducing likelihood of unwanted contact with hazardous substances. All other social impacts same as Action 15.1.
<u>Physical Resources</u> o Direct impact on solid waste management by providing better data. o Indirect impacts; may result in decreased illegal disposal and more waste going to Class 1 sites. All other environmental impacts same as Action 15.1.	<u>Financial</u> o Direct Cost-Public: Enforcing requirement; EPA and State Health Department staff time. (Standards have not yet been set; cost estimates not available.) <u>Institutional</u> o Same as Action 15.1.	<u>Direct Cost-Private</u> o Cost of staff time and supplies to keep better records. <u>Production of Goods and Services</u> o Employment-Indirect impact on employment since may create a very small number of jobs in larger companies. <u>Income and Investment</u> o No Impact. <u>Consumer Expenditures</u> o No Impact.	<u>Health and Safety</u> o Minor indirect beneficial impact on public health; may decrease the likelihood of illegal disposal. All other social impacts same as Action 15.1.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 15.4 Improve procedures for handling spills of hazardous wastes. (This Action could be implemented as part of Actions 12.1, 12.2, and 12.4 of the Water Quality Management Plan.)	a) Provide for training of firemen in proper procedures for handling spills in County Emergency Services Plans. b) Designate a single responsible agency for each county for notification and handling of spills, such as the County Office of Emergency Services or the County Health Dept.	County Offices of Emergency Services. County & cities for each county.	Ongoing. Ongoing.	Local resolutions, as appropriate. Local resolutions as appropriate.	\$ 1,200 ^a (\$14,000 ^a 1979)	\$ 1,200 ^a (\$14,000 ^a 1979)	State funds, DOT. Local funds.	After plan approval, cities & counties will adopt recommendations.
Action 15.5 Ensure proper handling of <u>hospital wastes</u> .	Require that infectious or pathological wastes from hospitals be disposed through incineration or processed for disposal to sewers.	State Health Dept.	Completed by April 1980.	AB 1593 (1977).	\$ 2,900 ^a (\$33,000 ^a 1980-2000)	\$ 2,900 ^a (\$33,000 ^a 1980-2000)	RCRA; State funds.	State Health dept. will implement.

^a Public cost.

^b Private cost.

^c Public and private costs.

Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.

ENVIRONMENTAL IMPACTS

INSTITUTIONAL/FINANCIAL IMPACTS

ECONOMIC IMPACTS

SOCIAL IMPACTS

Water Quality

- o Indirect impact. Reduces likelihood of hazardous materials being washed into sewers or allowed to run off in next storm.

Physical Resources

- o Direct impact on operations of transportation systems by improving safety since proper procedure for handling spills is known should a spill occur.

All other environmental impacts are same as Action 15.1.

Financial

- o Direct Cost - public:

(Administrative costs)

Counties and Cities (101) -

1979	Total for Region
r= 6-3/8%	\$9729
r= 10%	\$9098

County Offices of Emergency Services (9)

1979	Total for Region
r= 6-3/8%	\$4335
r= 10%	\$4054

Institutional

- o Direct impact on legal capability since requires nine separate resolutions.
- o Direct temporary impacts on allocation of local staff for firemen to obtain necessary training, emergency personnel to make changes in emergency plans, and staff to prepare resolutions.

Direct Cost - Private

- o No impact.

Production of Goods and Services

- o No impact.

Income and Investment

- o No impact.

Consumer Expenditures

- o No impact.

Health and Safety

- o Indirect impact on public health by decreasing possibility of harm from spills both for persons responsible for clean-up and for the general public.

All other social impacts are same as Action 15.1.

Air Quality

- o Appropriate incineration would need to be monitored.

Water Quality

- o Should ensure better treatment of infectious materials than landfill disposal.

Physical Resources

- o Direct impact on solid waste management; better preprocessing so can be incinerated or disposed of to sewers.
- o Indirect benefit of decreasing amount of materials going to land fills.

Energy

- o Appropriate incineration requires more energy than landfill disposal.

Amenities

- o No impact.

Financial

- o Direct Cost - Public:

(Administrative and regulatory costs)

State Department of Health

1980-2000	Total
r= 6-3/8%	\$33,417
r= 10%	\$24,182

(Development and enforcement of requirements)

Institutional

- o Indirect impact on public acceptability; possibly unpopular to operators of hospital facilities due to associated costs.
- o Indirect impact on legal capability since requires amendment to the State Hazardous Waste Control Act (in process).
- o Direct impact on allocation of State Dept. of Health staff due to need to enforce the requirements.

Direct Cost - Private

- o Cost of hospital staff time for preprocessing and occasional new equipment.

Production of Goods and Services

- o Employment - Indirect impact on employment; temporarily to install any needed facilities; permanent to help with preprocessing.

Income and Investment

- o Indirect impact due to capital required for new equipment and facilities.

Consumer Expenditures

- o Possible indirect impact due to increased cost to patients for hospital care.

Health and Safety

- o Indirect impact on public health; decreases possibility of accidental contact with pathological or infectious wastes.

All other social impacts same as Action 15.1.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 15.6 Establish and enforce regulations for on-site disposal of hazardous wastes.	Establish a permit and monitoring system for on-site disposal of hazardous waste.	State Health Dept.; BAAPCD; RWQCB; local agency.	1978	AB 1593 (1977); agencies' enabling legislation.	\$ 53,000 ^a (\$617,000 ^a 1980-2000)	\$ 53,000 ^a (\$617,000 ^a 1980-2000)	RCRA; State funds; Disposal fees.	Agreement to be negotiated between ABAG and State Health Dept.
Action 15.7 Ensure funding for adequate enforcement.	Ensure stable funding for adequate enforcement of existing regulations by State Dept. of Health and Counties, as appropriated under RCRA and AB 1593 (1977).	State legislature; U.S. Congress.	As soon as possible.		\$232,000 ^a (\$2,700,000 ^a 1979-2000)	\$232,000 ^a (\$2,700,000 ^a 1979-2000)	AB 1593 (1977).	ABAG will advocate.
^a Public cost. ^b Private cost. ^c Public and private costs. Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.								

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> o Indirect impact on air quality since the dust and odors associated with disposal could be monitored more easily.	<u>Financial</u> o Direct Cost - Public: (Administrative and regulatory costs) State Department of Health - 1980-2000 Total r = 6-3/8% \$585,196 r = 10% \$460,688 (approximately \$30,000/year) BAAPCD 1980 Total r = 6-3/8% \$ 12,462 r = 10% \$ 11,270 RWQCB 1980 Total r = 6-3/8% \$ 12,462 r = 10% \$ 11,270 Counties and Cities (101) 1980 Total r = 6-3/8% \$ 4,075 r = 10% \$ 3,685 <u>Institutional</u> o Indirect impact on public acceptability; possibly unpopular to generators of hazardous wastes that use on-site disposal due to perceived costs involved. o Direct impact since the legal capability of the State Dept. of Health to require and enforce such regulations is uncertain. o Direct impact on allocation of State Dept. of Health staff due to need to develop and enforce the requirements.	<u>Direct Cost - Private</u> o Indirectly, cost of on-site disposal facility modifications <u>Production of Goods and Services</u> o Employment - Indirect impact on employment, temporarily only, to install any needed facility modifications. <u>Income and Investment</u> o Indirect impact; capital required for any new facility modifications. Amount specific to each on-site disposal site. o Possible indirect impact on profits due to costs of compliance. <u>Consumer Expenditures</u> o No impact.	<u>Health and Safety</u> o Indirect impact on public health since decreases the likelihood of improper disposal of hazardous wastes. All other social impacts are same as Action 15.1.
<u>Water Quality</u> o Indirect impact since the appropriate criteria imposed on Class I sites could be applied.			
<u>Physical Resources</u> o Indirect impact on solid waste management; improves the development and operation of on-site disposal facilities.			
All other environmental impacts are same as Action 15.1.			
See impacts of Actions 15.1 - 15.6.	<u>Financial</u> o Direct Cost-Public: (Administrative cost in addition to costs in recommendations 18.1-18.6) ABAG- 1979-2000 Total r = 6-3/8% \$2,143 r = 10% \$1,972 Department of Health 1981-2000 Total r = 6-3/8% \$2,701,227 r = 10% \$1,885,411 <u>Institutional</u> o Direct impact on legal capability since increases the chance of State and Federal legislation (or budget allocations) to establish. o Direct impact on State Department of Health staff since funds would be available to hire additional necessary staff.	See impacts of Actions 15.1 - 15.6.	See impacts of Actions 15.1 - 15.6.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
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Policy 16

FUTURE CLASS I DISPOSAL SITES AND FACILITIES SHOULD BE LOCATED SO THAT THEY DO NOT HAVE ADVERSE AFFECTS ON HUMAN HEALTH AND SAFETY, AIR AND WATER QUALITY, WILDLIFE, CRITICAL ENVIRONMENTAL RESOURCES AND URBANIZED AREAS.

Action 16.1

If additional disposal capacity for hazardous wastes is needed (see Action 13.3), develop necessary arrangements that would lead to reservation and acquisition of site(s).

Pending the results of Action 13.3, convene affected counties to determine areas for further study and develop necessary intergovernmental and public/private arrangements for financing studies, reports, public review and site(s) reservation and/or acquisition.

Affected local jurisdiction(s) (to be determined).

Ongoing.

Local zoning authority.

NA

NA

None needed at this time (contingent on Action 13.3). Federal and State grants if Action 16.1 is needed.

After plan approval, cities and counties will adopt recommendations.

Policy 17

A REGIONAL PLAN FOR LONG-TERM WASTEWATER SOLIDS MANAGEMENT SHOULD BE PREPARED AND UPDATED.

Action 17.1

Prepare a regional plan.

Prepare a regional plan for long-term wastewater solids management as part of the regional solid waste management plan.

San Francisco Bay Region Wastewater Solids Study.

1978.

Federal Water Pollution Control Act (FWPCA) Amendments of 1972, Section 201.

\$64,000^a (\$752,000^a 1978)

0

Federal and State grants; local funds.

EPA and SWRCB will ensure implementation.

ds
alth.

Action 17.2

Update the regional plan.

Update the regional plan as part of the regional solid waste management planning effort.

ABAG.

Continuous after Dec. 77.

FWPCA Section 208.

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Federal grants.

EPA, and SWRCB, SSWMB will ensure implementation.

y.

Policy 18

FACILITIES FOR WASTEWATER SOLIDS MANAGEMENT SHOULD BE CONSTRUCTED IN CONFORMANCE WITH THE REGIONAL WASTEWATER SOLIDS PLAN AND THE ENVIRONMENTAL MANAGEMENT PLAN (208 PLAN).

Action 18.1

Develop facilities plans (Step 1). (This Action would be implemented as part of Action 5.1 of the Water Quality Management Plan.)

Develop facilities plans for wastewater solids management based on the regional wastewater solids plan.

Wastewater solids study will develop facilities plans for EBMUD, CCCSD, City & County of San Francisco, Cities of San Jose/Santa Clara; other wastewater agencies will develop their own facilities plans as necessary.

Dec. 78 for initial facilities plans.

FWPCA Sections 201 and 208.

\$ 78,000^a \$ (912,000^a 1979)

0

Federal and State grants; local funds.

EPA and SWRCB will ensure implementation.

^a Public cost.

^b Private cost.

^c Public and private costs.

Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Physical Resources</u> o Indirect impacts on solid waste management; decrease rate at which existing sites are filled and should ensure future Class I site capacity. <u>Energy</u> o No impact. All other environmental impacts are same as Action 13.3.	<u>Financial</u> o Direct Cost-Public: Staff time of the affected local jurisdiction to reserve site, including general plan changes and critical area rezoning. (Costs contingent upon determination of need for Class I site.) o See Action 13.3.	Same as Action 13.3.	Same as Action 13.3.
<u>Air Quality</u> o Indirect benefits since the plan would be in conformance with air quality goals and standards. <u>Water Quality</u> o Indirect benefits since the plan would meet requirements for protection of ground and surface water quality. <u>Physical Resources</u> o Direct benefits in management of wastewater solids. o Indirect benefits for surrounding ecosystems of disposal sites due to protection of surface and ground water quality. <u>Energy</u> o Indirect benefits in energy production since the plan may include site specific co-combustion projects (with refuse). <u>Amenities</u> o Indirect benefits since the plan would ensure mitigation measures for impacts related to amenities.	<u>Financial</u> o Direct Cost-Public: (Administrative and Regulatory Costs-plan development) San Francisco Bay Wastewater Solids Study- 1978 \$1,800,000 (partially spent) o Fiscal Effects on Local Government- - Proposed projects included in the plan may be financed by general obligation or revenue bonds. - Property tax rate may increase slightly - Part or all of the proposed project would be grant eligible after plan approval. <u>Institutional</u> o Implementation of regional plan may require JPA among municipal wastewater agencies. o Acceptable to wastewater treatment agencies and local solid waste management agencies. o Direct impact on involved agencies due to staff that must be reallocated to work on plan development.	<u>Production of Goods and Services</u> o The plan may recommend marketing of sludge. <u>Income and Investment</u> o Proposed projects may provide additional income and require private investment.. <u>Consumer Expenditures</u> o Cost for implementing the plan would be passed on to the public NOTE: 1. Wastewater Solids Study is doing an impact assessment that would be in much greater detail. 2. All impacts are possible, not probable, since recommended plan alternatives for Wastewater Solids Study have not been chosen.	<u>Housing Supply</u> o No impact. <u>Physical Mobility</u> o No impact. <u>Health and Safety</u> o The plan would be in compliance with health and safety standards to reduce hazards to public health. <u>Sense of Community</u> o No impact. <u>Urban Patterns</u> o The plan may help preserve marginal agricultural land from urban or suburban development.
Same as Action 17.1.	<u>Financial</u> o Direct Cost-Public: (Costs included under Action 2.1.) All other financial/institutional impacts same as Action 17.1.	Same as Action 17.1.	Same as Action 17.1.
See environmental impacts for Action 18.4.	<u>Financial</u> o Direct Cost-Public: (Administrative costs of plan development) 1978 \$970,000	See economic impacts for Action 18.4.	See social impacts for Action 18.4.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 18.2 Review proposed facilities plans.	Review proposed facilities plans and approve those that are consistent with the regional solid waste management plan, and the 20 year project list in the 208 plan.	EPA, SWRCB, RWQCB, State Health Dept., ABAG, State Clearinghouse.	1979.	FWPCA Sections 201 and 208, Office of Management and Budget-Circular A-95.	\$ 4,000 ^a (\$48,000 ^a 1978-2000)	0	Federal and State grants; local and State general funds.	Agencies will carry out existing review authorities.
Action 18.3 Design wastewater solids management facilities (Step 2). (This Action would be implemented as part of Action 5.1 of the Water Quality Management Plan.)	Design wastewater solids management facilities according to the approved facilities plans.	Wastewater Agencies.	1979-1980.	FWPCA Section 201.	\$ 1,266,000* (\$14,800,000 ^a 1979)	0	Federal and State grants; local funds.	EPA and SWRCB will ensure implementation.
Action 18.4 Construct wastewater solids management facilities (Step 3). (This Action would be implemented as part of Action 5.1 of the Water Quality Management Plan.)	Construct wastewater solids management facilities according to the approved facilities plan.	See Action 21.1.	1981-1982.	FWPCA Section 201.	\$24,800,000* (\$289,000,000 ^a 1980-2000)	0	Federal and State grants; local funds.	EPA and SWRCB will ensure implementation.

^a Public cost.

^b Private cost.

^c Public and private costs.

Note: Figures in parentheses are total costs expressed as present discounted value for recommended action throughout the period of implementation.

*Costs are included in Action 5.1 of the Water Quality Management Plan.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
See impacts for Action 18.4.	<u>Financial</u> <ul style="list-style-type: none"> o Direct Cost - Public: (Administrative costs of reviewing facilities plans) <u>ABAG</u> <p>1978-2000 \$400/year</p> <u>Reviewing Agencies (7) -</u> <p>1978-2000 \$3,750/year</p> <u>Institutional</u> <ul style="list-style-type: none"> o Reviewing agencies will have to allocate staff time to review plans. 	See impacts for Action 18.4.	See impacts for Action 18.4.
See impacts for Action 18.4.	<u>Financial</u> <ul style="list-style-type: none"> o Direct Costs-Public: (Administrative costs of facilities design) <p>1979 \$7,000,000 (committed funds)</p> <p>1979 \$9,700,000 (funds not yet allocated - contingent on review and approval)</p>	See impacts for Action 18.4.	See impacts for Action 18.4.
<u>Air Quality</u> <ul style="list-style-type: none"> o Direct temporary impact due to increase in dust level during construction. o Direct impact due to reduction in odor problems at new processing facilities. <u>Water Quality</u> <ul style="list-style-type: none"> o Direct benefits since the construction of facilities would ensure adequate handling and disposal of wastewater solids to protect ground and surface water quality. <u>Physical Resources</u> <ul style="list-style-type: none"> o Direct benefits in solid waste management. o Direct benefits for marginal agricultural lands if sludge is used for land application. <u>Energy</u> <ul style="list-style-type: none"> o Direct adverse impact due to energy required for facilities construction and operation of facilities. <u>Amenities</u> <ul style="list-style-type: none"> o Direct temporary, adverse impact due to noise associated with facilities construction. o Indirect adverse impact due to potential noise problems associated with operation of equipment at the facilities. 	<u>Financial</u> <ul style="list-style-type: none"> o Direct Cost-Public: (Costs of facility construction) <p>1980 \$70,000,00 (funds committed)</p> <p>1980 \$97,000,00 (funds contingent upon review and approval)</p> <p>(Costs of operation and maintenance)</p> <p>1981-200 \$16,700,000/year</p> <ul style="list-style-type: none"> o Fiscal Effects on Local Governments - Facilities construction may be financed by general obligation or revenue bonds. - Property tax rate may increase slightly. - Federal and State grants may be available (up to 87½% of the construction cost). <u>Institutional</u> <ul style="list-style-type: none"> o Facilities construction may require JPA or other agreements among wastewater management agencies and other public agencies. o Facilities construction may be viewed positively by wastewater management agencies and the public. 	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o Employment - Temporary and permanent increase in employment due to construction and operation of facilities. <u>Income and Investment</u> <ul style="list-style-type: none"> o Land application of sludge may require private investment, and marketing of sludge would require private investment. <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o Cost for facilities construction would be passed on to the public. 	<u>Housing Supply</u> <ul style="list-style-type: none"> o No impact. <u>Physical Mobility</u> <ul style="list-style-type: none"> o No impact. <u>Health and Safety</u> <ul style="list-style-type: none"> o Construction of the needed facilities would improve the handling and disposal of sludge (thereby reducing health and safety hazards). <u>Sense of Community</u> <ul style="list-style-type: none"> o Potential impact if odors or other nuisance or health problems accompany a facility. <u>Equity</u> <ul style="list-style-type: none"> o No impact. <u>Urban Patterns</u> <ul style="list-style-type: none"> o If the facilities could facilitate land application of sludge, it may have indirect, minor benefits for preserving marginal agricultural land.

Air Quality Maintenance Plan recommendations

RECOMMENDATIONS	DIRECT BENEFITS (Hydrocarbon emission reductions, tons/day) 1985 2000		IMPLEMENTING AGENCY (or agencies)	SCHEDULE FOR ACTION A - Adoption I - Fully Implemented	TOTAL COST/YEAR OF RECOMMENDED ACTION	FINANCING MECHANISM	LEGAL AUTHORITY
I. Stationary source controls							
GENERAL POLICY: MINIMIZE HYDROCARBON EMISSIONS FROM STATIONARY SOURCES							
Action 1 Use paints and other coatings that are water based and/or have a high solids content.	60	80	Bay Area Air Pollution Control District (BAAPCD)	A - 1978 to 1980 I - 1985	\$7,170,000 ^b	Administrative/Regulatory - Ad valorem tax revenues - ARB subvention Funds - Federal Clean Air Act funds	BAAPCD Enabling Legislation
Action 2 Use closed systems for storage and transfer of organic liquids.	40	65	BAAPCD.	A - 1978 I - 1983	\$17,000,000 ^b	Operating/Maintenance - Private	BAAPCD Enabling Legislation
Action 3 Use best available control technology (BACT) on new and existing hydrocarbon sources.	227	339	BAAPCD	A - 1980 I - 1985	\$529,000 ^a \$29,331,000 ^b	Capital - Private - California Pollution Control Financing Authority - Federal Small Business Administration Loan Programs	BAAPCD Enabling Legislation
<div><div>PROCESS</div><div>TECHNOLOGY</div><div>Organic storage.....Dual & parallel vapor recovery Tar pots.....Loading door assembly Paint spray booth.....Incinerator or low/no solvent coatings Architectural coating.....Low solvent coatings Dry cleaning.....Closed system with solvent recovery Chemical milling.....Fume scrubbers (packed bed) Cable tar coating.....Incineration Gasoline bulk storage.....Floating roof or fixed roof & vapor recovery Auto service station storage tanks.Closed balanced system with secondary system Auto fill operations.....Secondary vacuum assist system</div></div>							
Action 4 Continue the review of new & modified industrial and commercial facilities (new source review)	Variable, depending on the stringency of application. Maximum effect of 64 tons/day of hydrocarbon emissions reduced in 1985 and 200 tons/day in 2000.		BAAPCD	Currently being implemented	No direct costs		BAAPCD Enabling Legislation

^a Public agency

^b Private

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<p><u>Air Quality</u></p> <ul style="list-style-type: none"> o See "Direct Benefits" column. <p><u>Water Quality</u></p> <ul style="list-style-type: none"> o No impacts. <p><u>Physical Resources</u></p> <ul style="list-style-type: none"> o Between 18,000 and 25,000 gallons per day of organic solvents could be conserved from proposed organic solvent controls. o Best available control technology would consume construction materials, water, disposal facilities, etc. However, it does comprise many things and has not been identified with regard to Bay Area industrial operations. Consequently, more detailed assessments will require further definition of BACT. <p><u>Energy Resources</u></p> <ul style="list-style-type: none"> o Use of best available control technology for hydrocarbon emissions (including the use of high solids/water base coatings and closed systems for organic liquid storage) should not result in a net energy penalty. Certain technologies such as industrial water based coatings and solvent incineration involve energy penalties, while other technologies such as high solids coatings and improved vapor recovery systems produce energy savings. o Current new source review activities could be perpetuating excessive energy use by old and inefficient plant operations that are presently unable or unwilling to meet stringent NSR requirements in order to modernize. <p><u>Amenities</u></p> <ul style="list-style-type: none"> o The principal impact of the stationary source actions would be their contribution toward the improvement of air quality in the Bay Area. 	<p><u>Institutional</u></p> <ul style="list-style-type: none"> o The governmental structure for implementing these control measures already exists in the Bay Area Air Pollution Control District which actively enforces air pollution control programs in the Bay Area. The measures being proposed for consideration here are simply more stringent extensions of measures already in force for control of industrial and stationary sources of air pollution. <p><u>Financial</u></p> <p>Direct Public Costs of Implementation</p> <ul style="list-style-type: none"> o See public costs (a) in the column headed "Total Cost/Yr. of Recommended Action." <p>Fiscal Effects on Local Governments</p> <ul style="list-style-type: none"> o The BAAPCD operating funds are obtained from local property taxes and State and Federal grants. Exactly how the costs will be apportioned is presently unclear; however, no direct costs to local governments are expected 	<p><u>Production of Goods and Services</u></p> <ul style="list-style-type: none"> o Increased technological dependence by the Bay Area industrial sector to improve regional air quality will require considerable capital investment. In some instances, these added restrictions and costs may adversely affect the competitive position of local industries inter-regionally where the cost of these investments may be passed on to the consumers. o Measures pertaining to coatings will require that process changes occur in order to reduce levels of air pollution. Changed product composition resulting from different processes could result in reduced durability and therefore increased product liability potential for the coatings industry. Phased implementation of this program should help minimize these problems. <p><u>Income and Investment</u></p> <ul style="list-style-type: none"> o See Private Costs (b) in the column headed "Total Cost/Yr of Recommended Action." <p><u>Consumer Expenditures</u></p> <ul style="list-style-type: none"> o While the direct costs of implementing these measures will initially fall upon industry, many, if not all of them will find their way to the consumer and local taxpayer. Since supporting this type of activity is not the type of expense to result in increased productivity or in direct economic return for most of them, it may be considered an inflationary cost. In addition, higher prices for Bay Area products reflecting this cost may become less attractive to non-Bay Area consumers who may look elsewhere for the same product. On the other hand, consumers and local taxpayers may view the costs of implementation as an investment having non-economic but equally valuable return. In either case, implementation of the proposed control measures is likely to result in an increased cost of consumer goods. 	<p><u>Housing Supply</u></p> <ul style="list-style-type: none"> o No impact. <p><u>Physical Mobility</u></p> <ul style="list-style-type: none"> o No impact. <p><u>Health and Safety</u></p> <ul style="list-style-type: none"> o Air quality standards for each of the pollutants are based upon scientifically derived air quality criteria. Air quality criteria are an expression of current information concerning the relationship between various concentrations of pollutants in the air and their adverse effects on man and his environment. The control measures being proposed are designed to meet the standards, i.e., to reduce the concentration of various pollutants in the air. Pollutant concentration reductions from the air will reduce potentially adverse effects from these substances, thereby favorably impacting public health. o With regard to safety, the stationary source control program may eliminate many hazards associated with the use and storage of combustible solvents. <p><u>Sense of Community</u></p> <ul style="list-style-type: none"> o No impact. <p><u>Equity</u></p> <ul style="list-style-type: none"> o A major question of equity involves the competitive position of Bay Area industries that are placed under the restrictions and controls proposed by the stationary source measures. This question can be extended to employment opportunities for the local population. Some employment and business opportunities will be created in local industries producing air pollution control equipment. However, whether or not those opportunities will be available or sufficient to offset increased unemployment resulting from competitive disadvantage (see "Production of Goods and Services") is an issue requiring further exploration. The willingness of the U. S. Environmental Protection Agency and the California Air Resources Board to require similar measures outside of the Bay Area is of obvious concern to the region.

RECOMMENDATIONS	DIRECT BENEFITS (Hydrocarbon emission reductions, tons/day) 1985 2000		IMPLEMENTING AGENCY (or agencies)	SCHEDULE FOR ACTION A - Adoption I - Fully Implemented	TOTAL COST/YEAR OF RECOMMENDED ACTION	FINANCING MECHANISM	LEGAL AUTHORITY
II. Mobile source controls							
GENERAL POLICY: MINIMIZE HYDROCARBON EMISSIONS FROM MOTOR VEHICLES							
Action 5 Implement more stringent vehicle (light duty and heavy duty) exhaust emission controls--approx. 50% reduction below 1977 prescribed levels.	-	62	California Air Resources Board (CARB)	A - 1980 I - 1990	\$3,000 ^a \$24,910,000 ^b	- Private	Mulford- Carrell Air Resources Act
Action 6 Implement inspection/ maintenance program for light and heavy duty vehicles.	23	58	CARB and/or Bureau of Automotive Repair	A - 1978 I - 1985	\$1,395,000 ^a \$16,892,000 ^b	- I/M Program revenues - State General Fund	New Legislation Required
Action 7 Require heavy duty gasoline exhaust control devices on existing vehicles.	25	-	CARB	A - 1979 I - 1985	\$8,000 ^a \$1,534,000 ^b	- Private	New Legislation Required

^a Public agency^b Private

ENVIRONMENTAL IMPACTS

INSTITUTIONAL/FINANCIAL IMPACTS

ECONOMIC IMPACTS

SOCIAL IMPACTS

Air Quality

- o See "Direct Benefits" column.

Water Quality

- o No impact.

Physical Resources

- o No significant impact on physical resources is expected from more stringent exhaust emission controls where such can be achieved by further technological improvement of conventional vehicle engines. However, if new engine designs requiring alternative fuel sources are pursued to achieve this measure, then new materials may be required to manufacture these engines. (For example, electrically-powered vehicles may require special material to construct batteries capable of providing satisfactory power performance.) Of greater significance is the possibility that new engine technologies will utilize less specialized fuels, thereby reducing dependence on gasoline or petroleum per se.

Energy Resources

- o Mobile source emissions controls will produce significant energy savings through improved maintenance of engines and emission control systems, as well as through the eventual development of new engine technologies. The inspection and maintenance program and the retrofit program for heavy duty gasoline trucks could save approximately 10,000,000 gallons of gasoline per year, or about 240,000 barrels of oil per year. New engine technologies could eventually produce as much as 50 percent improvement in vehicle mileage, which in turn would mean annual energy savings of millions of barrels of oil.

Institutional

- o The governmental structure for implementing mobile source control measures already exists in the California Air Resources Board (CARB) which presently has primary responsibility for controlling vehicular emissions in the State. However, specific institutional arrangements for implementing both the inspection/maintenance programs and the heavy duty gasoline retrofit program will be required since none of them are within the current authority of CARB.

The California Air Resources Board and/or the Bureau of Automotive Repair (BAR) would likely assume responsibility for the regulation and operation of I/M programs. Local governmental agencies involvement is not anticipated. The CARB has had experience with implementing retrofit programs in the past. It is assumed that implementation of the proposed heavy duty gasoline retrofit program would be assumed by CARB.

Inspection/maintenance (I/M) programs can be directly administered by the State, or franchised out to private contractors. Data from a pilot I/M program currently being operated in the South Coast Air Basin suggests that the operation of such programs might make disproportionate demands on the administrative resources of the State. Therefore, a private-operated/public-monitored program may be preferable for the Bay Area.

FinancialDirect Public Cost of Implementation

- o See Public Costs (a) in the column headed "Total Cost/Yr of Recommended Action."

Fiscal Effect on Local Government

- o No impact.

Production of Goods and Services

- o A slight increase in the production activity of some industries servicing the automobile manufacturing industry might occur as new tooling required to produce newly designed engines is needed. New engine design may stimulate substantial change in the automotive repair and service industry. The implementation of the inspection/maintenance (I/M) measures would add a new line of service for the California automotive service industry. Some services presently exist for identifying defective emission control equipment on cars. They are not, however, universally applicable to all California registered vehicles. I/M programs for light, medium, and heavy duty vehicles would offer a universally applied service program for identification and repair of vehicles with excessive emission caused by maladjusted or defective emission control equipment.

Income and Investment

- o See Private Costs (b) in the column headed "Total Cost/Yr of Recommended Action."

Consumer Expenditures

- o The manufacture of new engine technologies would necessitate an increase in the initial cost of new vehicles. This increase may be offset, however, by savings in operating cost throughout the lifetime of the vehicle. Catalytic converters are estimated to cost about \$350.00 per heavy duty vehicle. (Price includes cost of the device and installation charges.) For a light and medium duty vehicle I/M programs an inspection fee of \$5-6.00 per vehicle would be required. The average cost of repairs for the catalyst equipped vehicle is about \$45.00.

Housing Supply

- o No impact.

Physical Mobility

- o Because of increased cost of private transportation, the mobility of the limited income segment of the Bay Area population may be impaired. This would be particularly true for those located in other than urban centers.

Health and Safety

- o These control measures would substantially reduce carbon monoxide emissions from motor vehicles. Therefore, substantial health-related benefits may accrue to those segments of the population that experience the heaviest exposure to carbon monoxide concentrations while residing, working or shopping in urban centers.

Sense of Community

- o No impact.

Equity

- o The measures will adversely impact some groups in urban areas more severely than others--particularly those with limited income.

Urban Pattern

- o No impact.

RECOMMENDATIONS	DIRECT BENEFITS (Hydrocarbon emission reductions, tons/day) 1985 2000		IMPLEMENTING AGENCY (or agencies)	SCHEDULE FOR ACTION A - Adoption I - Fully Implemented	TOTAL COST/YEAR OF RECOMMENDED ACTION	FINANCING MECHANISM	LEGAL AUTHORITY
III. Transportation controls							
GENERAL POLICY: REDUCE MOTOR VEHICLE EMISSIONS THROUGH TRANSPORTATION ACTIONS TO REDUCE VEHICLE USE							
Action 8 Increase tolls on bridges.	0.2	Not esti- mated sep- arately; included below with emission reductions due to compact develop- ment	Metropolitan Transportation Commission (MTC) and California Toll Bridge Authority	A - 1980 I - 1980	(\$13,000,000 ^b)	- Toll revenues	AB 664
Actions 9 & 10 Implement regional parking strategy to discourage private auto use and encourage high-occupancy auto use.		↓	Cities, counties, employers, MTC			- Parking charges	Local Municipal Tax Enabling Legislation
Action 9 - Parking tax	0.3			A - 1980 I - 1981	\$15,000 ^a \$(6,000,000 ^b)		
Action 10 - Preferential parking for carpools and vanpools	0.1			A - 1978 I - 1985	\$886,000 ^a		
Action 11 Provide additional transit service.	0.7			MTC, transit districts (e.g., MUNI, AC, BART)	A - 1978 I - 1985	\$18,540,000 ^a	- Federal Mass Transportation Assistance Programs - Fare revenues - Local Trans- portation Development Act Funds - State Highway Trust Fund diversions
Action 12 Increase bus and carpool lanes/ramp metering.	0.2		Caltrans, transit districts, cities and counties	A - 1979 I - 1985	\$7,438,000 ^a	- Federal Aid Highway Programs - State Highway Programs funds	- AB 69 (State Transportation Planning Enabling Legislation) - AB 363 (Bay Region Trans- portation Planning Legislation) - Caltrans Enabling Legislation - Local Planning and Traffic Control Enabling Legislation
Action 13 Implement an auto control zone in San Francisco central business district to reduce traffic.	0.1		City of San Francisco	A - Previously adopted I - 1980	\$128,000 ^a	- City General Funds - Local Trans- portation Development Act Funds	San Francisco Traffic Ordinances

^a Public agency^b Private

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> <ul style="list-style-type: none"> o See "Direct Benefits" column. 	<u>Institutional</u> <ul style="list-style-type: none"> o MTC and California Toll Bridge Authority can presently set toll rates. o Additional transit service would be provided by the present operators. o Ride sharing programs would be handled by a non-profit corporation now being established. o Caltrans would implement high-occupancy vehicle (HOV) lanes and carpool lots. o San Francisco would institute the auto control zone as specified in the Transportation Element of the San Francisco General Plan. o Cities and counties would implement bicycle measures. Private employers and businesses would be encouraged to participate. 	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o New employment in the transit sector. o Possible adverse effect on parking lot operators. <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o Increase in cost of operating private autos. o Savings to those commuters utilizing carpools, vanpools or transit. 	<u>Housing Supply</u> <ul style="list-style-type: none"> o No impact. <u>Physical Mobility</u> <ul style="list-style-type: none"> o Additional transit service would increase mobility of all transit users. o Carpool/vanpool measures would increase travel options for most commuters. o Some restrictions on private auto access in the auto control zone. <u>Health and Safety</u> <ul style="list-style-type: none"> o Reduction in auto accidents with improved peak period flow. o Improved pedestrian safety in the auto control zone. o Possible increase in number, but not rate, of bicycle accidents with increased usage. <u>Sense of Community</u> <ul style="list-style-type: none"> o No impact. <u>Urban Patterns</u> <ul style="list-style-type: none"> o The combination of incentives like additional transit service and disincentives on private auto use will encourage a more compact land use pattern, with employees living closer to transit lines and/or their jobs. <u>Equity</u> <ul style="list-style-type: none"> o Measures such as additional transit service will particularly benefit low income, handicapped and other persons who depend on this mode of travel. o Pricing disincentives will impact primarily middle income commuters who choose to continue driving their cars.
<u>Water Quality</u> <ul style="list-style-type: none"> o No impact. 			
<u>Physical Resources</u> <ul style="list-style-type: none"> o No impact. 			
<u>Energy</u> <ul style="list-style-type: none"> o Gasoline savings from carpooling, the shift to transit, improved traffic flow, and the shift to bicycles. o Minor increase in transit fuel consumption. 			
<u>Amenities</u> <ul style="list-style-type: none"> o Cleaner air. o Improved pedestrian environment in auto-control zone. 	<u>Financial</u> <ul style="list-style-type: none"> o Certain measures, notable the additional transit services, bus/carpool/lanes, and bicycle systems, are rather costly. There is some funding available, but additional funds will be needed. o Other measures would generate revenue which could be used to finance the incentives mentioned above. 		

RECOMMENDATIONS	DIRECT BENEFITS (Hydrocarbon emission reductions, tons/day) 1985 2000	IMPLEMENTING AGENCY (or agencies)	SCHEDULE FOR ACTION A - Adoption I - Fully Implemented	TOTAL COST/YEAR OF RECOMMENDED ACTION	FINANCING MECHANISM	LEGAL AUTHORITY
Action 14 Provide more ride sharing services such as jitneys and vanpools.	1.7 Not estimated separately; included below with emission reductions due to compact development	Caltrans, Employers, MTC	A - Previously adopted I - 1979	\$300,000 ^a	- Federal Mass Transportation Assistance Programs	Federal Energy Legislation
Action 15 Develop more extensive bicycle systems.	2.0	Cities, counties, MTC, Caltrans	A - 1980 I - 1985	\$438,000 ^a ^a Public agency ^b Private	- Federal-Aid Highway Programs - Local Transportation Development Act Funds	- Federal-Aid Highway Legislation - Local Transportation Development Act Legislation

IV. Development and land use management

GENERAL POLICY: ALTER REGIONWIDE DEVELOPMENT PATTERNS TO REDUCE AUTOMOBILE TRAVEL BY MEANS OF LOCAL AND REGIONAL POLICIES ON LAND USE AND URBAN SERVICES

The reductions in emissions are based on a total population in the region of 5.4 million. If the population were at the higher range projected (6.1 million), the emission reductions shown would be higher, but so would the total from which the reductions would be subtracted.

Not 24
estimated

Cities, counties, Local Agency Formation Commissions, special districts, ABAG, BAAPCD, MTC, State Water Resources Control Board, California Department of Transportation, U.S. Department of Transportation, Environmental Protection Agency

A - 1978
I - 2000

Direct administrative and regulatory costs to be estimated when agencies specify actions they will take to carry out recommendation for compact development.

Depends on specific actions

Existing authority contained in California Government Code; Health and Safety Code; State Constitution; relevant Federal legislation.

Policy A

EXTEND NEW DEVELOPMENT ONLY TO THOSE LOCATIONS WITH EXISTING SEWER AND WATER SERVICE OR SEWER AND WATER SERVICE COMMITTED IN CAPITAL IMPROVEMENT PROGRAMS.

Action 1

Local Agency Formation Commissions (LAFCOs) adopt city and special district spheres of influence throughout the region as soon as possible.

Action 2

LAFCOs adopt the "urban service area" concept for defining urban service commitments and projecting urban land needs for 5, 10 and 20 year periods.

Action 3

LAFCOs approve annexations and formation of cities and special districts consistent with Action 2 findings on urban service commitments and urban land needs.

Action 4

Counties and cities enact non-urban zoning outside urban service areas.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
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<p><u>Air Quality</u></p> <ul style="list-style-type: none"> o See "Direct Benefits" Column. <p><u>Water Quality</u></p> <ul style="list-style-type: none"> o Would provide greater preservation of outlying area watersheds, estuarine system and groundwater recharge areas. o Would lower per capita consumption rates of municipal and domestic water supplies due to increased development densities (e.g., smaller lawns, etc.). o Would provide regionwide reduction in surface runoff pollution due to less impervious surface coverage (streets, highways, rooftops, etc.). o Would mean higher localized surface runoff pollution in urban areas due to increased densities. <p><u>Physical Resources</u></p> <ul style="list-style-type: none"> o Less conversion of undeveloped land to urban uses would increase regionwide preservation of critical environmental areas (e.g., prime agricultural lands, ecological habitats such as marshes, steep slopes and flood-prone areas). o Would reduce conversion of agricultural land to urban uses. o Would reduce damage to flora and fauna due to lower pollutant concentrations. o Could reduce conversion of mineral, timber, quarry and geothermal areas to urban uses. o Could increase development pressure on land uniquely suited for special development purposes in urban areas (e.g., airports, parks). <p>(continued, next page)</p>	<p><u>Institutional</u></p> <ul style="list-style-type: none"> o Would mean significant changes in planning and zoning administration-related activity (e.g., amendment of regional and local general plans, zoning ordinances and subdivision regulation revisions, etc.). o Greater coordination would be needed among local agencies whose decisions affect development. o Would require increased governmental coordination and technical support to facilitate local action. <p><u>Financial</u></p> <ul style="list-style-type: none"> o Greater use of excess capacity in urban public service facilities (e.g., sewers, schools, etc.) may result in lower user charges, taxes, etc. o Would mean a major reduction regionwide in capital construction costs due to limited extension of public services (e.g., highways, sewer collectors, water lines, etc.). o More efficient solid waste collection due to higher densities could result in lower collection costs. o Would increase tax base for urban areas. o Individual property tax assessments may increase, then level off. o Sales tax revenue would be increased in urban centers. o Increased government administration costs would be expected. o Fee and user charges may increase in certain outlying areas. 	<p><u>Production of Goods and Services</u></p> <ul style="list-style-type: none"> o Would be conducive to increased transit service. o Would increase transit-related employment. o Would increase job opportunities in urban areas. o Would increase commercial activities in urban areas. o Would mean less commercial growth in outlying areas. <p><u>Income and Investment</u></p> <ul style="list-style-type: none"> o Would lower regionwide demand for investment due to reduced public capital requirements. o Would shift emphasis of public and private financial investment from outlying areas to urban areas for renovation and replacement. o Would stimulate housing rehabilitation and maintenance industries. o Would stimulate higher density residential production. o May affect housing industry profit/cost structure. o Residential land prices would increase in the urban centers and close-in areas (e.g., increased site preparation costs for bypassed land) and decline in outlying areas beyond urban services. o Industrial land prices not significantly impacted due to large industrial land supply within urban areas. <p>(continued, next page)</p>	<p><u>Housing Supply</u></p> <ul style="list-style-type: none"> o Would increase conversions of older urban area single-family structures. o Would lower proportion of substandard units regionwide due to rehabilitation and redevelopment efforts. o May cause temporary lag in new residential construction in urban areas as builders adjust to zoning and subdivision regulation changes. o Would reduce new residential construction in outlying areas within the region. o Would increase new construction and rehabilitation activity throughout urban areas, particularly older development areas. <p><u>Physical Mobility</u></p> <ul style="list-style-type: none"> o Could increase transit availability for all trip purposes (e.g., work, school, recreation, shopping, etc.) and for transit-dependent residents. o Would increase pedestrian activity as urban services are brought within closer proximity. o Would reduce regionwide total vehicle miles traveled. o Would mean shorter trips by automobile resulting in increased travel time savings. o Local traffic congestion may increase as local streets are used more. o Would mean greater inconvenience for private automobile uses (e.g., parking might be more difficult to find). <p>(continued, next page)</p>
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AIR QUALITY MAINTENANCE PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	DIRECT BENEFITS (Hydrocarbon emission reductions, tons/day) 1985 2000	IMPLEMENTING AGENCY (or agencies)	SCHEDULE FOR ACTION A - Adoption I - Fully Implemented	TOTAL COST/YEAR OF RECOMMENDED ACTION	FINANCING MECHANISM	LEGAL AUTHORITY
Action 5 Counties and cities enact temporary moratoria on urban zoning and subdivisions outside urban service areas pending the enforcement of non-urban zoning in such areas.						
Policy B RESTRICT DEVELOPMENT OUTSIDE URBAN SERVICE AREAS IN AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ENVIRONMENTAL RESOURCES, HAZARDS, OR AMENITIES).						
Action 6 Counties and cities enact agricultural zoning or large-lot rural residential zoning (generally one dwelling unit per 40 acre minimum lot size).						
Action 7 Counties and cities initiate, continue or expand programs under the California Land Conservation Act (Williamson Act), the Open Space Easement Act of 1974 and the Z'berg-Warren-Keene-Collier Forest Taxation Reform Act of 1976 outside urban service areas.						
Action 8 Counties, and cities establish programs of public land management including acquisition, purchase/leaseback, purchase/transfer of development rights, etc.) for locations outside urban service areas.						
Policy C DEVELOP UNIMPROVED LAND WITHIN URBAN SERVICE AREAS WHERE URBAN SERVICES EXIST OR ARE COMMITTED IN CAPITAL IMPROVEMENT PROGRAMS.						
Action 9 ABAG, counties, cities and LAFCOs establish "early warning" inter-agency information exchange programs concerning urban service facility plans at the earliest stages of project planning.						
Action 10 ABAG, counties, cities, and LAFCOs expedite plan or project reviews where early information on facilities has been provided, under Action 9.						
Action 11 Counties and cities initiate rezoning and permit preference procedures in locations with existing but unused service capacities (with emphasis on water, sewer, transportation and school services).						

ENVIRONMENTAL IMPACTS

INSTITUTIONAL/FINANCIAL IMPACTS

ECONOMIC IMPACTS

SOCIAL IMPACTS

Energy

- o Would reduce gasoline consumption due to less automobile travel.
- o Would increase consumption of transit-related fuel.
- o Would provide overall reduction in transportation fuel consumption.
- o Would lower per unit household energy consumption.

Amenities

- o Would preserve scenic areas.
- o Would improve visibility regionwide.
- o Would increase numbers of people exposed to noise levels of urban areas.

Consumer Expenditures

- o Could increase housing prices and rents for a short time due to any production lags as builders adjust to zoning and subdivision regulation changes.
- o Would reduce increases in residential waste collection charges.
- o May cause increases in urban area property taxes to support services to new development and because of increased land values.
- o Would reduce increases in residential and commercial energy charges.
- o Could mean more disposable income due to lower transportation costs.
- o May shift housing demand outside Bay Area
- o May affect consumer housing preference.

Health and Safety

- o Would significantly improve public health due to reduced oxidant concentrations regionwide.
- o May cause greater exposure to localized CO pollutant concentrations, depending on the success of technological controls and the amount of increase in use of transit.
- o Could increase pedestrian safety problems on local streets.

Sense of Community

- o Would enhance neighborhood identities due to diversity and density of activity.
- o Adverse social effects may result from higher density development.
- o Would increase time for non-work activity due to shorter commutes.

Equity

- o Could expand transit availability for transit-dependent residents.
- o Would broaden housing opportunities if lower per dwelling unit costs are passed on to residents.
- o Rehabilitation and redevelopment would probably displace poor, aged, minority and handicapped residents.
- o Budgets of those on low- and fixed incomes may be adversely affected due to possible cost of living increases in renewed areas.

RECOMMENDATIONS	DIRECT BENEFITS (Hydrocarbon emission reductions, tons/day) 1985 2000	IMPLEMENTING AGENCY (or agencies)	SCHEDULE FOR ACTION A - Adoption I - Fully Implemented	TOTAL COST/YEAR OF RECOMMENDED ACTION	FINANCING MECHANISM	LEGAL AUTHORITY
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Policy D

COMPLETE, AS SOON AS POSSIBLE, ALL NEEDED SEWER, WATER OR TRANSPORTATION SERVICE IMPROVEMENTS WITHIN ADOPTED URBAN SERVICE AREAS.

Action 12

LAFCOs review all city, county, or special district sewer, water, or transportation service capital improvement programs and report on priority needs within each urban service area.

Action 13

ABAG review sewer, water and transportation needs within all urban service areas to determine region-wide priorities among such service needs.

Action 14

ABAG favorably review applications for State/Federal financial assistance from agencies lacking service capacity within urban service areas, where other existing or committed services have been found by the LAFCO to be capable of accommodating additional development.

Policy E

IMPROVE HIGHWAY, STREET, ROAD AND TRANSIT SYSTEMS CONSISTENT WITH LOCAL ACTIONS TO STAGE LAND DEVELOPMENT.

Action 15

Counties and cities enact planning and zoning regulations to stage land development consistent with the scheduling of urban services (including but not limited to "development sequence zoning", "tiered zoning districts", development timing permits etc.).

Action 16

Caltrans, MTC, counties, cities, and special districts plan, program, fund and construct highway, street, road and transit improvements consistent with local action to stage land development.

Policy F

INCREASE HOUSING AND JOB OPPORTUNITIES IN EXISTING URBANIZED AREAS BY ENCOURAGING PUBLIC AND PRIVATE REBUILDING INTO COMPATIBLY MIXED COMMERCIAL, INDUSTRIAL AND RESIDENTIAL LAND USES.

Action 17

Counties and cities initiate and/or expand housing conservation programs in existing urbanized areas.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS

RECOMMENDATIONS	DIRECT BENEFITS (Hydrocarbon emission reductions, tons/day) 1985 2000	IMPLEMENTING AGENCY (or agencies)	SCHEDULE FOR ACTION A - Adoption I - Fully Implemented	TOTAL COST/YEAR OF RECOMMENDED ACTION	FINANCING MECHANISM	LEGAL AUTHORITY
<p>Action 18 Counties and cities initiate and/or expand commercial and industrial development and redevelopment in existing urbanized areas.</p> <p>Action 19 Counties, cities and special districts initiate and/or expand incentives to public and private redevelopment in urbanized areas. Emphasis would be on sewer and water facilities, and extensive transit service improvements, but should also include educational and cultural facilities and public safety service improvements where appropriate.</p> <p>Action 20 ABAG, counties and cities analyze possible local revenue reforms to provide adequate financial resources to carry out Action 19.</p> <p>Action 21 ABAG support State legislation to provide local governments with adequate fiscal resources to carry out Action 19.</p> <p>Action 22 ABAG oppose Federal and State legislation that would hamper the ability of local governments to carry out rebuilding programs to increase job and housing opportunities in existing urbanized areas.</p>						

Policy G

ENCOURAGE "INFILL" DEVELOPMENT OF BYPASSED VACANT LAND WITHIN URBAN SERVICE AREAS.

Action 23

Counties and cities undertake planning studies to inventory bypassed land, identify development problems, and resolve questions of best potential use.

Action 24

Counties and cities adopt necessary changes in zoning and permit procedures to facilitate development of bypassed parcels affected by special conditions.

Action 25

Service agencies design sewer, water and transportation systems to improve accessibility and service ability of bypassed vacant land in existing urban communities.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS

RECOMMENDATIONS	DIRECT BENEFITS (Hydrocarbon emission reductions, tons/day) 1985 2000	IMPLEMENTING AGENCY (or agencies)	SCHEDULE FOR ACTION A - Adoption I - Fully Implemented	TOTAL COST/YEAR OF RECOMMENDED ACTION	FINANCING MECHANISM	LEGAL AUTHORITY
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Policy H

DEVELOP AT HIGHER DENSITIES WITHIN SERVICE AREAS WHERE EXISTING OR COMMITTED URBAN SERVICE CAPACITIES, INCLUDING TRANSIT, CAN SUPPORT THE HIGHER DENSITIES.

Action 26

In urban service areas with adequate sewer, water and transit capacities, counties and cities rezone appropriate locations to permit higher densities.

Action 27

Counties and cities enact ordinances (such as those for planned unit development or cluster zoning) to foster higher densities on appropriate sites.

Policy I

LIMIT DEVELOPMENT OF LAND WITHIN URBAN SERVICE AREAS WHERE SOIL, SLOPE, OR OTHER CONDITIONS CAN SUPPORT ONLY LOW-DENSITY DEVELOPMENT.

Action 28

Counties, cities and special districts deny primary urban services to these locations by excluding them from capital improvement programs and design of service systems, and by enactment of hookup moratoria, etc.

Action 29

Counties, cities, and special districts establish programs of public land management (including but not limited to public land acquisition, purchase/transfer of development rights, purchase/leaseback, etc.) to maintain appropriate sites in open uses.

Policy J

IMPROVE THE BALANCE OF JOBS AND HOUSING IN JURISDICTIONS THROUGHOUT THE REGION TO REDUCE THE NECESSITY FOR LONG DISTANCE HOME-TO-JOB TRAVEL.

Action 30

Cities and counties adopt programs to increase local employment opportunities if a substantial proportion of their residents work elsewhere.

Action 31

Cities and counties adopt programs to increase local housing opportunities in a price range suitable for their work forces if a substantial proportion of their work forces live elsewhere.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS

AIR QUALITY MAINTENANCE PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	DIRECT BENEFITS (Hydrocarbon emission reductions, tons/day) 1985 2000	IMPLEMENTING AGENCY (or agencies)	SCHEDULE FOR ACTION A - Adoption I - Fully Implemented	TOTAL COST/YEAR OF RECOMMENDED ACTION	FINANCING MECHANISM	LEGAL AUTHORITY
<p>Action 32 ABAG conduct A-95 and EIR reviews to support local government efforts to improve the balance of jobs and housing in communities throughout the region.</p> <p>Action 33 ABAG support State and Federal funding allocations for facilities and programs offering incentives to economic development or housing development in appropriate jurisdictions.</p>						
<p>Policy K MIX RESIDENTIAL/COMMERCIAL AND INDUSTRIAL DEVELOPMENT IN COMMUNITIES THROUGHOUT THE BAY REGION.</p> <p>Action 34 Counties and cities revise zoning ordinances to allow compatible mixtures of land uses with adequate design or performance standards (including planned unit developments, performance standard zoning, etc.).</p> <p>Action 35 Counties and cities expand application of conditional use permits where appropriate.</p>						
<p>Policy L DISCOURAGE NEW LARGE-SCALE LAND DEVELOPMENT PROJECTS THAT ARE EXCLUSIVELY COMMERCIAL, INDUSTRIAL OR RESIDENTIAL, UNLESS SUCH PROJECTS CLEARLY DEMONSTRATE THAT THEY IMPROVE THE OVERALL BALANCE OF JOBS AND HOUSING IN THAT CITY, COUNTY, OR SUBREGION.</p> <p>Action 36 Counties, cities and LAFCOs deny incorporation or annexation of large-scale development proposals that are exclusively commercial, industrial or residential, unless such incorporation or annexation can be shown to improve the overall balance of jobs and housing in the city, county, or subregion.</p> <p>Action 37 MTC, the California Department of Transportation and transportation districts deny regional transportation system access or extension to proposed large-scale land development projects that are exclusively commercial, industrial or residential unless such transportation actions can be shown to improve the overall balance of jobs and housing in the city, county or subregion.</p>						

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS

RECOMMENDATIONS	DIRECT BENEFITS (Hydrocarbon emission reductions, tons/day) 1985 2000	IMPLEMENTING AGENCY (or agencies)	SCHEDULE FOR ACTION A - Adoption I - Fully Implemented	TOTAL COST/YEAR OF RECOMMENDED ACTION	FINANCING MECHANISM	LEGAL AUTHORITY
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Policy M

FUND NEW WASTEWATER AND TRANSPORTATION FACILITIES ONLY AFTER AREAS SERVICED HAVE TAKEN ACTIONS TO CARRY OUT ACTIONS OF THIS PLAN.

Action 38

The State Water Resources Control Board and the Environmental Protection Agency require applicants for wastewater facilities under Section 201 of the Federal Water Pollution Control Act to demonstrate, prior to construction funding, that specific actions (including but not limited to land development regulations, urban service commitments, etc.) have been taken by affected jurisdictions to carry out actions of this plan.

Action 39

The U.S. Department of Transportation, the California Transportation Commission, the California Department of Transportation and the Metropolitan Transportation Commission require applicants for transportation improvement grants to demonstrate, prior to funding for acquisition and construction that specific actions (including but not limited to land development regulations, urban service commitments, etc.) have been taken by affected jurisdictions to carry out actions of this plan.

Policy N

REVIEW DEVELOPMENT PROPOSALS FOR AIR QUALITY EFFECTS AND CONSISTENCY WITH COMPACT DEVELOPMENT RECOMMENDATIONS IN THE PLAN. (INDIRECT SOURCE REVIEW)

Action 40

ABAG, BAAPCD and MTC adopt memoranda of understanding and procedures for prompt and thorough joint review of significant development proposals. Review would be conducted for proposals (such as shopping centers, industrial parks, office complexes, etc.) where significant air pollution could result from the project's generation of auto traffic.

Action 41

BAAPCD adopt permit procedures for application to indirect sources.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS

RECOMMENDATIONS	DIRECT BENEFITS (Hydrocarbon emission reductions, tons/day) 1985 2000	IMPLEMENTING AGENCY (or agencies)	SCHEDULE FOR ACTION A - Adoption I - Fully Implemented	TOTAL COST/YEAR OF RECOMMENDED ACTION	FINANCING MECHANISM	LEGAL AUTHORITY
Action 42 ABAG encourage and support local government efforts to determine direct and indirect effects on air quality in making local land use decisions. Such support shall include technical assistance and analysis.						
Action 43 ABAG encourage and support local government efforts to reduce adverse effects of development proposals on air quality, including but not limited to assistance in identifying and implementing mitigation measures for adverse impacts of municipal wastewater facilities and transportation improvement programs.						
Policy O ADOPT FINANCIAL PROGRAMS TO SUPPORT LOCAL AND REGIONAL AGENCY ACTIONS AND PRIVATE SECTOR DEVELOPMENT ACTIONS CONSISTENT WITH POLICIES IN THIS CHAPTER TO REDUCE HOME-TO-WORK DISTANCE AND AUTO DEPENDENCY.						
Action 44 ABAG, counties and cities support State and Federal legislation to provide subventions and other fiscal assistance to cities and counties carrying out development policies to achieve air quality standards.						
Action 45 ABAG, counties and cities support State and Federal legislation providing tax incentives to the private sector for rebuilding and development within existing urbanized areas.						
Action 46 ABAG, counties and cities support State and Federal legislation providing financial support to local and regional agencies for carrying out development management policies and reviews to achieve air quality standards, especially to mitigate adverse impacts on low- and moderate-income households.						

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS

RECOMMENDATIONS	DIRECT BENEFITS (Hydrocarbon emission reductions, tons/day) 1985 2000	IMPLEMENTING AGENCY (or agencies)	SCHEDULE FOR ACTION A - Adoption I - Fully Implemented	TOTAL COST/YEAR OF RECOMMENDED ACTION	FINANCING MECHANISM	LEGAL AUTHORITY
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Policy P

ADOPT A COORDINATED REGIONWIDE PROGRAM FOR CARRYING OUT ACTIONS FOR ATTAINMENT AND MAINTENANCE OF AIR QUALITY STANDARDS THROUGH DEVELOPMENT AND LAND USE MANAGEMENT ACTIONS BY CITIES, COUNTIES, SPECIAL DISTRICTS, ABAG, BAAPCD, MTC, LAFCOs AND OTHER APPROPRIATE LOCAL AND REGIONAL AGENCIES.

Action 47

ABAG identify, within six months of General Assembly adoption of an initial air quality maintenance plan, which implementing actions are being carried out by local and regional agencies.

Action 48

ABAG include, in each annual revision of the AQMP, agreements reached among local and regional agencies for carrying out land use and development management actions included in the initial AQMP.

Action 49

ABAG shall include, in each annual revision of the AQMP, an identification of actions not being carried out by all appropriate agencies, and which actions are to be carried out by appropriate agencies by the next annual revision of the AQMP.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS

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